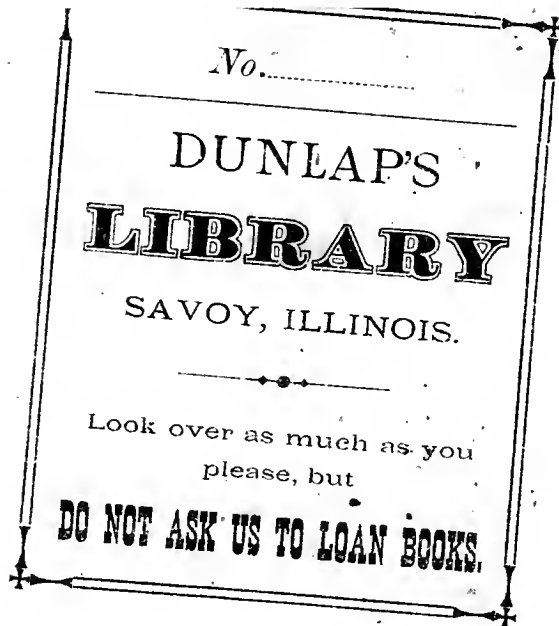




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THE ILLINOIS FARMER.

VOL. IX.

SPRINGFIELD, ILL., JAN., 1864.

NO. 1.

The Illinois Farmer,

DEVOTED TO THE

FARM, THE ORCHARD AND THE GARDEN,

PUBLISHED BY

BAILHACHE & BAKER,

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M. L. DUNLAP, Editor.

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January.

The figures are again changed, the three has now become a four. Another wave of time—a new volume is unrolled, and to-day we make the first entry in its open pages. The year just closed will live long in history; a year in which ignorance and barbarism has sought to crush out the happy homes of the free, the lovers of social order, of education, of refinement and of progress in the world's art. The savages of the wilds and the barbarians of the sunny South have made common cause against the institutions, that are dear to a moral and industrious people, and have met them on the field of blood, but valor and reckless daring have been no match for

the graduates of the district school and of the industrial pursuits, and they have turned back the wave of war, that would have passed over them and returned the bitter cup to the lips of the invader. The poor misguided and vicious Indian has sued for peace, but the barbarian, ever true to the instincts of his tribe, must be cut off from his kind and his hearth made desolate, it is not for him to save his family from ruin, he knows no half way measures, he must rule or ruin, be either master or slave; and as he is not to be master in this case, we must push on the war until he is utterly routed. There will be no peace until our armies pass over every foot of soil, from the Ohio to the Gulf, and have laid waste the country. Until this is accomplished, no laborer will return to his home, no father will resume the plow, no son will come back to the farm or the shop, no brother will make fond greeting to his sister. We may therefore make up our minds that grim visaged war shall stalk through the fields of the South to crush out its system of barbarism, to make it pass through the fiery ordeal, where the wrongs of long years shall be wiped out in blood. New calls will be made for soldiers in the field, and not all who plow and sow in the spring shall reap in autumn, for the continuance of the war will be the great work of the year, now just taking its place on the stage of action.

It is a slow process to change the

habits of a people, long used to the peaceful pursuits of rural labor, of mechanics and of commerce, to that of the soldier, but the process is sure, and the barbarian must yield to the steady persevering valor of the educated soldier, who makes all ready before he strikes.

During the past year genius has not been idle, to make amends for the want of laborers on the farm, the gang plow, the wheel rake, the two horse cultivators, the hay pitcher, the binder and improved mowers have taken the place of thousands of hands that are away handling muskets and training huge guns.

We shall look for other improvements, to fill up the drain on farm labor. What these may be we know not, but of what we yet need we can speak with more confidence. First we need a combined planter and roller, for the planting of corn. We want our plows to run with wheels, so that the driver can ride. We want the reaper so arranged that it will gather and carry the sheaf to the binder, who will ride and deliver the bundles ready for putting into shocks. We want a machine to cut the standing corn ready to shock up. We want a corn sheller adapted to hand or horse power, so that each farmer may shell his own corn, so as to save the cobs for fuel, as the cobs of a hundred bushels of corn is equal to half a cord of wood, or half a ton of coal. In addition to these new implements we wish to impress upon all farmers and owners of small lots, the value of the small fruits, such as currants, strawberries, grapes, etc., as well as to give renewed attention to a good garden. But above all minor considerations let the farmer on the prairies plant timber trees, white

willow, golden willow, box alder, silver maple, cotton wood or something of the sort. We have several cords of weeping and golden willow, set out in cuttings in the spring of 1858, that we shall use this year and which has cost us but a trifle, we can make it ready for the stove cheaper than to haul it from the grove a distance of eight miles. Put out your timber belts, live fences and orchards, and if you do not have as many greenbacks in the autumn, you will have laid in more real wealth that will bring or save you greenbacks at some future day.

Do not forget to hand your ILLINOIS FARMER to your neighbor and ask him to subscribe, that he too can make progress with you.

Brains are now coming into use on the farm, and the farmer who neglects to use them at the proper time, will rue it. See, therefore, that the stock is ready for every day use. Brains, manure, good implements and muscle are the elements to depend on for the year 1864.

AIR THE CELLAR.—It is important that the cellar, where the vegetables for the family are kept, should be well aired. On all pleasant days when the air is above freezing, we open the outside cellar door; in fact, there is not a day that this door is not entered for some purpose, the door leading to the kitchen being seldom used. In this way the cellar is always kept sweet, and no noxious gasses are there to pass up into the living room, to poison the air. The bottom of the cellar is cemented and is nearly as hard as stone. Much of our spring sickness can be traced to foul and damp cellars that have been kept closed during the win-

ter. So well is this understood that many persons will not have the cellar under the house, but made separate. This we think an extra expense, and imposing extra labor on the family. These out door cellars, as they are called, are never well aired, and the vegetables do not keep so well in them, as the kind that we have when well aired, as it can be; besides this the house will last much longer with a good dry cellar under it.

Agriculture.

[Correspondence Chicago Tribune.]

Farm Labor and its Equivalent.

The crops of 1863—Care of the corn Crop—Fall plowing—Killing of the Peach Buds—Frozen Cellars.

CHAMPAIGN, Ill., Jan. 4, 1864.

The holidays are now over, and we again settle down to the staid realities of farm life. The Government Assessor will soon be looking into the profit side of the ledger, for the purpose of making up our incomes. Have your book posted, pay what you owe, renew your subscription to the TRIBUNE, your county paper, and at least one agricultural journal, keep good fires, and be happy.

The season, or rather the year 1863 has been a most singular one for the farmer. Commencing with a large stock of ten cent corn, and closing with a light supply at ninety cents, a difference of nine hundred per cent. It is not probable that such extremes will occur again in the history of the present generation.

During the year a large per centage of the labor has been drawn away from the farms to assist in the war, not only as soldiers, but in the correlative departments of the army. These drafts have been seriously felt, but less so than if the country had produced the usual crops and no new improvements had been made in farm machinery. This latter can be reckoned as a respectable per cent. of the labor abstracted. The boy on his sulky two-horse cultivator has done more and better work than two men with their old double-shovel plows, and three to four times that with the single shovel or one horse plow. The girl driving the sulky rake rolls up the windrow and bunches the hay ready for the pitchfork. Two horses and the boy have done the cutting of the grass, and in many cases have built the loads and tended the hay fork, and with the aid of one horse, put it far up in the hay-mow or on top of the stack, thus saving the labor of strong arms under the old mode. The millions of bushels of corn that have been sent to market, have been shelled in machines with self-regulating feeders and bagging apparatus that have saved largely in human muscles. The threshing machine has been armed with a straw

carrier that has done the stacking, while the new screens cleaned the grain ready for market.

Thus have the farmers of the Northwest kept on in the even tenor of their ways, and had the season been a usual one for crops, would have made a larger aggregate of farm products than ever before. The spring was favorable, on the whole, for the putting in of the spring crops, and all those which matured early, such as spring wheat, flax, oats and barley, have made good returns; while sorgho, corn, buckwheat, potatoes and late vegetables have suffered seriously.

The autumn has been favorable for the gathering of the light crop, for plowing and the setting of orchards. In the north part of the State the plowing is well along, but in the center and south little of it has been done. With the exception of our own work in that line we do not know of an acre that has been turned over. Now that the TRIBUNE has a large circulation in these parts of the State, we have some hope of arousing the farmers to the great value of fall-plowing their land.

Great complaints are made, all through the basin of Egypt, that the spring rains prevent getting the crop in, in season. The land cannot be plowed, consequently the crop cannot be put in until after the rain ceases, when, too often, the summer drouth comes in to cut short the hopes of the farmer. Now, if the land had been plowed in autumn into narrow beds, say of two rods wide and in early spring stirred to the depth of four or five inches with a six-shovel cultivator, and the crops sowed or planted in March and April, so as to have the benefit of the spring rains, we can see no reason why that part of the State would not produce annual crops with as much certainty as other parts.

The late call of troops will make another draft on farm labor, which we must be prepared to make good with new implements and a more economical application of labor. This is attainable to a great extent. In the first place, now is the time to begin, by getting up the year's supply of fuel, of fence posts, timber for sheds, corn houses and other purposes. The man who has to send a team to the woods for fuel in harvest time, will find that he committed a fatal error in January, and if he fails to have his cribs ready at the time for husking corn, he will have cold fingers before the crop is harvested. Every fall we see hundreds of teams wending their way over muddy roads to haul rails, four to eight miles to make corn cribs. We never could afford to put our corn in a rail pen, as we have no money or time to throw away in that direction, and a crop of corn once made is worth the saving in good order. Farm after farm can be pointed out within sight of our window, where not only hundreds but thousands of bushels of corn have been thrown out of the cribs or rail pens as rotten and worthless, and that within the last three years. It would appear that lessons thus appealing to their pocket would sink deep into their hearts, for many of them are now paying seventy-five to eighty-five cents a bushel, six successful crops gave us an over supply, and the price went down so low that on every dollar received for corn another dollar was lost, but a single short crop occurs and the price goes up nearly four times that at which it can be profitably produced. If it takes six full crops to carry the price down to half its cost of production and but one failure, to place it four hundred per cent. above, will it not be found good economy to

provide like the Egyptians of old, against the famine? Then look to it and make your cribs during the leisure of winter, not rail pens covered with the fleecy clouds, but with a good board or shingle roof.

The winter promises to be one of unusual severity, and it will stand the farmer in hand to shelter his stock so as to economize the short supply of fodder which has been made still shorter by large sales to contractors to the government.

EFFECT OF THE STORM ON PEACH TREES.

This morning, knife in hand, we waded out to the peach orchard and examined over a hundred buds, not one of which was alive; all had the well known brown speck in the center, which but too truly points to the failure of the peach crop. It is not probable that a further investigation will show a more favorable result.

As the apple trees made a moderate growth, it is not probable that they are injured by the cold.

Cellars are reported badly frozen, and of course the remnant of the short vegetable crop will come in for further shortening.

RURAL.

Climate and Production of Illinois.

We clip the following from the circular, of Commissioner Phillips of the Ill. Cent. R.R. land Department.

CLIMATE AND SOIL.—The climate of Illinois is healthy, and here the mortality is less than in almost any other part of the country. The emigrant seeking a location regards the healthfulness of the district as matter of primary consideration, and it is not without gratification that we arrive at the conclusion that Illinois, so far as its sanitary condition is concerned, ranks with the most favored States of the Union. The vital statistics collected in 1860 show that in this State the deaths per cent. to the population were in that year only 1.14, while the average of the whole country was 1.27. The ratio of deaths to the living population in Massachusetts was 1.76; Tennessee 1.39; Arkansas, 2.06; Kentucky, 1.45; Mississippi, 1.57; Missouri, 1.52; Connecticut, 1.35; Kansas, 1.37; Louisiana, 1.76; Maine, 1.23; New York, 1.22. For the purpose of this comparison we have selected States in every section of the Union. The figures are accessible to all who will take the trouble to examine the official reports, and are a sufficient reply to much misrepresentation. Extending 380 miles from north to south, Illinois has all the varieties of climate to be found between Boston, in Massachusetts, and Norfolk, in Virginia: in the southern part, the genial climate of Virginia, Kentucky and Tennessee, and in the northern section more nearly resembling that of Pennsylvania, Southern New York, New Jersey and Connecticut.

The soil in the different parts of the State presents very marked characteristics. From the latitude of Chicago as far south as the Terre Haute and Alton R. R., the country for the most part is open prairie, with here and there groves of timber, and timbered on the banks of the various streams. The soil in this region consists of a rich black loam, and is remarkably adapted to the production of corn, sorgho and tame grasses. For stock raising no better land can be found. South of this line the

soil is lighter and of greyish tinge—the country is also more broken, and the timber more plentiful. The small prairies in this region produce the best of winter wheat, tobacco, flax and hemp. From Centralia to Cairo, in the South, the country is heavily timbered. In this district, fruit, tobacco, cotton, and the different productions of the border States, are largely cultivated and highly remunerative. A large number of saw mills are erected near the line of the Railroad, the lumber from which commands at all times a ready sale.

INDIAN CORN.—This is perhaps the most important crop in the country. It is applied to such a great variety of purposes, and is so indispensable an article for foreign consumption, that however abundantly it may be produced, the constantly increasing demand will press heavily upon the supply. In 1859 the United States yielded 827,694,528 bushels, of which Illinois contributed 115,296,779, about fifty millions of bushels more than any other State; and from the greater breadth of land which will be planted in 1863, we may fairly calculate that the next harvest will afford 150,000,000 bushels. Illinois stands pre-eminently first in the list of corn-producing States.

WHEAT.—For the culture of wheat the lands of the Illinois Central Railroad are in all respects equal to any in the State. One great advantage which these lands have, is their nearness to the Railroad, by which the purchaser has the means of putting his crop in the market at the earliest or most favorable time, and at a cheap rate of transportation. During last year the stations on this road sent forward to market 4,688,755 bushels of wheat, besides 567,627 barrels of flour. In Southern Illinois, winter wheat is almost certain to yield a good return to the grower. The reaping, threshing and cleaning machines, now so generally in use, have made wheat growing a source of great profit to the farmer.

COTTON.—It seems well established that cotton is to become a remunerative crop in the southern part of Illinois. It was cultivated last year in almost every town south of Centralia, and if we regard the planting as an experiment, the result is completely satisfactory. It would be a low estimate to assume that 5,000 bales of ginned cotton were grown in this State last year. The reports that come in are in the highest degree favorable, and there are numerous indications that the planting this spring has been increased four fold. It would be fair to presume that all, or nearly all the seed grown in the State, has been planted but it is impossible to state the quantity with exactness. In March and April there was a large demand made upon the neighboring States, (particularly Tennessee), for cotton seed, and up to the 1st of May more than one hundred tons had been sent forward from Cairo and distributed at the following points on the Illinois Central Railroad. The quantity is given in sacks of fifty pounds each:

Sandoval,	140 sacks.	Carbondale, . . .	711 sacks.
Centrlia,	63 "	Jonesboro, . . .	64 "
Ashly,	115 "	Dongola, . . .	117 "
Richview,	447 "	Villa Ridge, . .	49 "
Tamaroa,	197 "	Cobden,	21 "
Du Quoin,	1245 "		

TOBACCO.—It is supposed that fully 11,000,000 lbs. of tobacco were grown in Illinois last year, much of it, particularly that produced in the southern part of the State, of the very finest quality. It is well known that, besides producing more

pounds per acre, the grade of tobacco from new lands is of superior description to that from old lands. The average produce per acre is considerably larger here than in Virginia; and of the Illinois Central lands now offered for sale, there are many thousands of acres equal, if not superior to any tobacco lands in the world. Bearing in mind the fact that the industry hitherto directed to the cultivation of the plant in Virginia; and North Carolina, and the tobacco States, has in a measure been diverted into other channels, it is almost certain that for years to come tobacco must bear a greatly enhanced price.

FRUIT.—Much attention is directed to Southern Illinois, on account of its peculiar adaptation to fruit raising. It has the advantage of early season, as well as a soil especially suited to the growing of fruits and vegetables, together with unequalled railroad facilities, by means of which the product is brought to the very door of all great markets of the North-West. Fruit placed upon the cars in the eve. will reach Chicago the next morning. St. Louis is still nearer than Chicago; and strawberries, tomatoes, etc., are supplied to Cincinnati nearly a fortnight in advance of the ripening of these luxuries in the immediate neighbourhood of that city. It is the early market that gives the greatest profit to the fruit grower. This very year, strawberries, from Cobden and Makanda were placed in Chicago as early as the 14th of May. The Railroad Company supplies every convenience for transporting fruit to market. Cars are run with especial reference to this branch of traffic, and the time of running the trains is so adjusted as best to suit the requirements of shippers. Southern Illinois has become the best fruit-growing region of America. While every part of Illinois is to some extent adapted to fruit culture, it is only in the southern part of the State that all conditions are found in the highest perfection. Pears, apples, peaches, grapes and strawberries, are produced in all abundance. During the last year upwards of 200,000 fruit trees were planted in orchards south of Centralia, within six miles of the railroad track: but no matter to what extent they may be multiplied, the demand for fruit will always be in advance of the capacity to furnish what is wanted.

STOCK RAISING.—Illinois is the great stock-raising State of the country—sending two thousand head of beef cattle a week to the New York market.

In the census return of 1859 the live stock in Illinois had a valuation of \$24,209,258, and in 1860 it had increased to \$73,434,621—only two States (New York and Pennsylvania) exceeding that amount of value. The raising of stock for market has been the source of many fortunes in Illinois. The Company has large tracts of land well adapted by nature to the raising of cattle, sheep, horses and mules—better adapted, indeed, than are the lands of almost any other State of the Union. During the year 1862, the Illinois Central Railroad has brought to Chicago, from various stations along the line, upwards of 30,000 head of beef cattle, and about 10,000 sheep. Wool growing is a branch of industry that cannot be overdone, and will inevitably be largely increased.

Preserving Sweet Potatoes.

The following mode of preserving sweet potatoes is given in the last report of the Agricultural De-

partment at Washington, by J. C. Thompson, of Tompkinsville, Staten Island:—

“For winter use, before the first frost select a dry, clear day. Cut the vines with a scythe, leaving the stem to which the potatoes are attached, three or four inches long, to lift them by. The vines are readily eaten by cattle. Use a fork for raising the potatoes; lift them by the stem, and lay them on the ridge to dry. In a few hours they will be ready to pack. Prepare plenty of dry cut straw (old is preferable), and take straw and barrels or boxes to the field. Select the best potatoes, handling them carefully without bruising them. Put a layer of straw at the bottom of the barrel and then alternate layers of potatoes and straw until it is filled. The barrels are then to be moved to a dry room or cellar, where there will be no frost. If they are placed in a cellar they must be raised from the floor, and must not touch the wall. Keeping warm and dry is the secret of their preservation. They will keep six or eight months and improve in quality. From one plot of ground 39 by 100 feet, I gathered, in October last, 43½ bushels.”

Chicory.

MR EDITOR.—Having noticed in one of last spring numbers of the *RURAL AMERICAN*, an article on the cultivation of chicory, and of its being an excellent substitute for coffee, I was induced to send to you to obtain some of the seed, and try my luck with its cultivation. Well, you sent me an ounce of seed, with instructions to cultivate, with a promise to instruct us how to prepare it for the table. Now, I sowed the seed, and cultivated the plants according to instruction, except I sowed about as thick again. I think, as I ought to, consequently, the plants did not grow as large as they would if it had been sown on perhaps twice the amount of ground. But as it was, I got about eight bushels of roots.

We prepare it for use in this way: Wash the roots clean, and then slice them up in slices about a quarter to half an inch long, and then place it on tins, and dry it in the stove oven till it is about the consistency of roasted coffee, and then pound it up, and it is fit for use, and is cooked the same as any other coffee. It think that it is far preferable to any other substitute that I have ever used, and, in fact, I think it is about as good as the real coffee, and I am well convinced that it is much more healthy.

If you have any better way for preparing it for the table, will you please tell us in your next number as you promised last spring.

Yours Truly,

G. H. P.

COTTON RAISING IN IOWA.—Hon. Isaac Newton, the commissioner of the Agricultural Department, has received a letter, dated Washington, Iowa, November 26th, in which the writer says: “We had a frost about the 20th of September, but not sufficient to hinder an average crop (cotton.) I made 1,200 pounds of cotton to the acre this season. The ‘green seed’ will turn out better than any other cotton, while the ‘North Carolina’ does exceedingly well.” The cotton seed from which this cotton was raised was furnished by the Agricultural Department.

Horticulture.

Illinois State Horticultural Society.

WINTER MEETING.

FIRST DAY—MORNING SESSION.

ALTON, Dec. 15, 1863.

The Society met this morning in the Mercantile Hall, a fine building just completed, and owned by Mr. Reed; President Minier in the chair. The attendance was very fair considering that only the Ohio and Mississippi and Chicago and Alton railroads grant return passes. We can see no reason why the railroad companies should not grant the same courtesies to this valuable State institution, that they do to the State Agricultural Society, more especially the Illinois Central, which is so deeply interested in the progress of fruit culture and market gardening from Chicago to Cairo. We observe but one member from that part of the State, reaching a distance of 365 m. l. s. and no one from the main line, but we trust that more will arrive. Over fifty members have answered to the roll call and taken their seats.

S. G. Minkler, of Spicie Grove, offered the following resolution:

Resolved, That each session of the society be opened with prayer; that the clergy of the city be invited to conduct the religious exercises; and that in the absence of the clergy, the present session be opened with prayer by the President.

The resolution was adopted.

An appropriate prayer was made by the President, members rising to their feet. W. C. Flagg, Corresponding Secretary, greeted and welcomed the society to this city, on behalf of its citizens.

Mr. Miller, chairman of the committee of reception appointed by the Alton Horticultural Society, stated that it was the purpose and pleasure of the citizens to entertain members at their homes, during their stay in the city, and suggested a recess of ten minutes, that members might register their names and be assigned places by the committee.

C. D. Bragdon moved that delegates present from societies be requested to hand in their names and credentials to the Secretaries. Carried.

The following named persons were reported:

H. T. Mudd, Dr. H. Clagg, J. J. Kelley, delegates from the St. Louis Horticultural Society; H. T. Mudd, Geo. Husmann and John Scherer, delegates from the Missouri State Horticultural Society.

By vote, these gentlemen were invited to take seats with, and participate in the discussions by the society.

President Minier then read his annual address. It was mainly congratulatory. The suggestions of importance in it were the appointment of a committee, a standing committee, in each of the three (or more) grand divisions or fruit sections of the State, to report and revise fruit lists adapted to these sections respectfully. And he suggested whether the Vice Presidents of the Society—one in each Congressional district—might not with propriety do this work, they have only nominal duties to perform.

He called attention to the fact that the "Old Guard," the veterans in horticultural service, are

passing away, and suggested the importance of filling up the ranks with recruits.

He reviewed the history of the Society's Fair at Rockford, and congratulated the Society upon its moral and financial success.

He called attention to the fact that the railroads of the State do not adequately recognize the service this society is doing and has done them, by promoting the production of fruit for market, and increasing the amount transported over their lines. He urged that a more liberal recognition of the work of this society on the part of railroad companies would be only what is due the society, and no damage to railroad interests.

He called the attention of members to the propriety of paying greater attention to the cultivation of the honey-bee, in connection with horticulture.

He also urged the propriety of investigating the claims of the Ailanthus silk-worm of China, recently introduced in this country.

The address was brief, sound and suggestive; and was, on motion, referred to a committee of three, consisting of Dr. Long, of Alton; Jno. Higgins, of Woodburn, and S. Shepherd, of Hennepin.

On motion, W. C. Flagg, Dr. E. S. Hull, W. F. Miller, were appointed a committee on Programme.

AFTERNOON SESSION.

Messrs. Phoenix, Bryant and Stewart were appointed a committee on Fruits; Mr. Husmann and Mr. Mudd, of Mo., Dr. Shroder, Dr. Warder and Whitney, committee on Wines, of which there is a good display.

The Treasurer reported cash on hand of \$116, after paying the expenses of the Rockford Fair, and other expenses, up to this date, showing the Society in a good, healthy condition.

The Corresponding Secretary made a verbal report, stating that he had been endeavoring to get fruit lists from different parts of the State, representing the principal distinct localities. To this end he had distributed about 500 circulars, and had received replies from about one-tenth of them. From these replies he had been laboring to make a report: but circumstances had prevented his completing it. He asked that it be referred to the Executive Committee, and, if approved by them, that he have further time wherein to complete it. The matter was referred to the Executive Committee.

DIVISIONS OF THE STATE.

This proved a knotty question in which the meeting soon became tangled up, and it was finally decided to compromise the matter between science and convenience, and adopted the line of the Logansport, Peoria & Burlington railroad, for the southern limit of Northern Illinois, and the Terre Haute and Alton railroad that of the northern limit of Southern Illinois.

APPLE LISTS FOR NORTHERN ILLINOIS.

The list of summer apples recommended by the society heretofore for general cultivation was taken up, read over, and where members objected to any on the list, such objection was stated, and the objector moved to strike it from the list.

Early Harvest.—M. L. Dunlap, of Champaign county, moved to strike it from the list. He had fruited it in North Illinois fifteen years, and had got but two crops from it. He would strike it out;

would scarcely put it in the list for amateurs, although it was an excellent table apple.

J. S. Shearman, of Winnebago county—The tree of the Early Harvest is rather tender with me to succeed well.

W. C. Flagg, of Madison county—I have looked over forty lists of apples from gentlemen in different parts of the State, with a view to learn which variety is the most frequently recommended, and it is found to be the Early Harvest.

O. B. Galusha, of Kendall county—There is no other fruit to take its place in its season. That is why I shall vote to retain it.

J. H. Stewart, of Adams county—The American Pomological Society has recommended it, basing the recommendation upon lists furnished them from all parts of the country, and I think their recommendations should stand.

Mr. Shearman—It by no means follows that we of Northern Illinois should be governed in our selection of varieties in our locality by what the American Pomological Society may recommend.

A. R. Whitney, of Lee county—I have marketed about twenty bbls. of this variety the past season, from old trees; and it is as good and hardy in the nursery with me as it is good in the orchard. It should be cultivated early in the season, and let alone late.

Voted to retain it on the list.

Yellow June.—This apple was identified as Kirkbridge White; i. e. the apple on the list as Yellow June is not the Yellow June, but the above named fruit, and the list was corrected in this respect.

The Yellow June.—W. C. Flagg moved to add it to the list.

C. R. Overman, of McLean county—It is not to be recommended because of its superior quality, but because of its earliness. It occupies a distinct place in the season. I know of no other variety to put in its place.

Mr. Dunlap moved to amend, recommending it for further trial. It was so recommended.

Benoni was added to the list for general cultivation.

The list of Autumn Apples was taken up.

Maiden's Blush.—O. B. Galusha moved that it be struck from the list for general cultivation.

Mr. Overman—It is one of the most profitable apples of the season. It will always be popular. The people will have and pay for it.

Mr. Galusha—If the people have a depraved taste, we want to correct it. This society is not organized to follow public opinion, but to lead it—to educate taste.

The Maiden's Blush is not worthy of cultivation to gratify anybody's taste.

Mr. Overman—The right estimate of the value of anything is obtained by comparison. I would very much rather have the Maiden's Blush than the Keswick Codlin.

Mr. Stewart, of Adams county—We cannot give up the Maiden's Blush. It is a most profitable market fruit—a good bearer, handles well, bears transportation well, and sells well when in market.

Mr. Redfield—It is a cheat, a snare and a delusion.

D. Andrews—To recommend this apple is to be fifty years behind the times. While it is beautiful and tempting, it is worthless to any one with ordinary good taste.

Mr. Stewart—We cannot ignore the popular de-

mand. We have produced and sold thousands of barrels of them; and the public estimation of the fruit is the best test of its merit.

Mr. Galusha—If we follow to the position taken by the gentleman from Adams county, we shall graft and cultivate the Milam and other worthless varieties, that are good-looking and yet vile trash. We must lead public opinion and taste I again urge the rejection of this apple.

Mr. Barton, of Madison county—He had been told by fruit dealers in this city that there is more money in the Maiden's Blush, for shipment to Chicago and the North, than in any other variety of apples.

Mr. Flagg—Chicago contains a class of people who like large and fine-colored apples, regardless of their quality.

Mr. Bragdon—The reason why Chicago people pay so much for the Maiden's Blush is because they are governed in their purchases largely by the price asked for a fruit. Because it is fair and beautiful, the dealers charge much more for it than for much better apples. Because they charge more nine-tenths of the consumers suppose it the best the market affords, and purchase accordingly.—Your best fruit goes to market without any instructions to dealers as to the relative value or real merit of varieties. You charge him no more for a good than for a poor variety. In nine cases out of ten you do not label your fruit, so that the consumer, who is rarely a promologist, knows nothing of the indifferent-looking fruit; and if he does happen to get hold of it, and wants more, he has no name by which he can call it and ask for more. He cannot describe it, and he takes the best-offered him next time. Name your fruit as it goes into market, make the dealer pay more for the best, and insist that he ask more for it, a taste will quickly be educated to distinguish between the good and the indifferent.

Mr. Bryant—This discussion is not one in which I take much interest. It seems to be a dispute between taste and profit. It is a poor but profitable apple; and whatever we may do with it, so long as it will sell it will be cultivated.

The motion to strike from the list was lost.

Lovel.—Mr. Galusha—It has a reputation for blighting. I ask for information on that point.

Mr. Andrews, of Winnebago county—It is a favorite apple with me. I am glad that it is brought up. Where I have known it, it has been very profitable—the most profitable of any apple I know. It should be more cultivated than it is. It does not blight where I know it.

Mr. Murtfeldt corroborated the above statement and the variety was recommended for trial.

Holland Pippin.—Mr. Galusha moved that it be added to the list for general cultivation. It is superior to the Maiden's Blush, and he would have put it in its place if he could have got the latter stricken from the list. It was added to the list.

Dyer.—Mr. Bryant moved to add the Dyer to the list of fall apples for amateur cultivation. He spoke in very high terms of it. It was so added.

Rawle's Janet.—Mr. Dunlap moved to strike out this apple from the list of winter apples for general cultivation. He had fruited it for fifteen years, but had grown but one good crop of it during that time. He had yet to hear of its ripening well in the north part of the state, it had the appearance of immaturity. In the south part of the

State it was valuable and should be in their list, but north it must give place to a better apple.

Mr. Murtfeldt—It is a good apple with me. It is productive. Its chief merit is that it blossoms late, and is sure to escape late spring frosts.

Mr. Whitney—It bears well with me. The great trouble is that it overbears.

Mr. Minkler—That is precisely its character with me.

Mr. Galusha—There are lots of money in it.

Mr. Dunlap—Coe says that the trees should be root-grafted—my trees are top or stock-grafted; that may make the difference.

Mr. Whitney—My trees are both root and top-grafted. It does equally well on both.

Mr. Redfield—It bears better if it is top-grafted. It is a poor fruit unless well cultivated.

Mr. Dunlap withdrew his motion.

Gilpin or Little Romanite, &c.—Mr. Galusha—I move than it be struck from the list. It has a rich juice and the property of keeping well. But it is not fit in its raw state, to put into the human stomach.

Mr. Murtfeldt—It is an excellent baking apple. good for sweet pickles, and an excellent market apple.

Mr. Whitney—It is one of the best apples, if not the best for spring cider. Cider manufactured from it in the spring will sell at a dollar per gallon, and it keeps well till spring.

The motion was lost.

Paradise Winter Sweet—Mr. Murtfeldt moved that they be added to the list of winter apples for general cultivation. It was so added.

EVENING SESSION.

Mr. Galusha moved the appointment of a committee for each division of the State, to report a list of apples: 1st for market purposes; 2d for family use; 3d for trial.

Messrs. Galusha, Whitney and Murtfeldt, for Northern Illinois; Messrs. Stewart, Hull and Overman for Central Illinois; and Messrs. Baker, Flagg and Wright for Southern Illinois.

PEACH CULTURE.

Dr. E. S. Hull, of Alton, read an essay on peach culture. The Dr. is one of the most successful and intelligent cultivators of the peach, and the essay attracted no small attention, as will be seen by the discussion. We prefer to let the Dr. speak for himself, and therefore copy his essay:

"It may be considered an axiom in horticulture, that all of our cultivated plants do best in a soil and atmosphere that most nearly resembles that of the countries of which they are natives; and that any great removal from these conditions will require some difference of treatment at the hands of the cultivator.

It is true that the peach will exist within wide limits of latitude; that in almost all sections of the world, where the severity of winter does not kill the trees, or wherever the cold of the southern winters is sufficient to give the trees a period of rest, the peach tree will grow. There are facts, however in vegetable physiology that are of the highest importance to the horticulturist. To learn the conditions of success in the prosecution of any object, is a step in the direct path. Merely empirical efforts add nothing to the general store of

knowledge where many conditions are combined, and it can be of no permanent value to be able from actual observation to record all the changes of phenomena of a seed by the peach from the period of germination and growth; to give the elements that enter into its structure; or to be able to state with accuracy the several ingredients and the exact proportions of each of which the soil is composed,—so long as the real cause of the action is unknown or unexplained, or the natural structure of plants are disregarded. Various results are produced by a deviation from the laws which regulated the formation of vegetable secretions. Light and heat are the agents, though not the only agents, upon which all plants depend; and as light and heat increase or decrease, so must the treatment of plants be varied to suit the altered conditions to which we would subvert them.

The peach is generally considered to be really indigenous only to parts of Persia or China; and from the former country to have been early introduced into Italy; thence to different parts of Europe and into England about the year 1550; thence to Spain and France, and by the colonists into the United States. But whether the peach is really indigenous only to the countries first named, is a question we consider open for investigation. It was recorded by Father Hennepin, who was the first who has given us a description of the regions of Louisiana as it then was. In his voyage down the Mississippi river, he describes the peach trees discovered by him in all those regions as being of great size. Father Hennepin's statements, taken in connection with recent observations of the Creole or native sorts, by which it is known that the trees of the more southern portions of Alabama, Mississippi and Louisiana bloom from two to three weeks earlier than either the seedling or improved varieties of the North when removed to those States, has led to the belief that those sections of country may justly claim the peach to be a native habitant of those parts of the world also.

Botanists regard the peach and nectarine as only slight varieties of each other, differing only in the skin, with a perceptible Prussic acid flavor in the nectarine not contained in the former fruit. Many instances are recorded of both peaches and nectarines growing on the same tree and branch, without artificial aid. Horticulturists are, I believe, agreed in considering them one species of fruit, which they have arranged in four divisions, viz:

1. Peaches—those whose flesh separates freely from both skin and stone.

2. The Free-Stone smooth peaches or nectarines.

3. The Cling-Stone peach, the flesh adhering to the stone and skin.

4. The Smooth-Skinned peaches, or nectarines, the flesh adhering to the stone.

There are other divisions necessary to be understood before any certain progress can be made in identifying varieties of the peach. These relate to the leaves, and are divided into three classes:

1. Trees whose leaves are crenated or sawed to a moderate depth, or have globular glands on the foot-stalk.

5. Those whose leaves are crenated and have ear or kidney-shaped glands.

3. Those whose leaves are deeply sawed or toothed, and are without glands on or near the foot-stalk.

Let the horticultural student acquaint himself with these several characteristics, and then divide these into two sections,—the one having large flowers and the other small flowers. He may then proceed with the examination of fruits, and will, with the aid of the distinctions named, be able to arrive at some definite results; will be able to give satisfactory reasons why this or that variety of fruit is the one under consideration. Without a correct understanding of these natural divisions of the peach, but little knowledge can be reached in the nomenclature of sorts.

To the English much is due that has been written on the growth and cultivation of the peach.—Perhaps it is a little curious that we should have adopted so many of the principles of our transatlantic brethren in the management of our trees. They have written treatise on treatise to demonstrate the course pursued in Britain; they have provided us with books descriptive of their mode of practice, and gardens to re-produce in our soil and climate what they have learned at home. How preposterous it would be to introduce their modes of practice into this country will appear when we consider that, out of all the known species of fruits, only strawberries and gooseberries attain perfection in their climate; and that all other fruits require specific attention to secure a limited degree of success in England, when the sun can but seldom show a disc brighter than would appear to the beholder here when viewed through smoked glass, and where the moisture in both the ground and atmosphere is in excess, a coldness of soil exists, the effects of which it becomes of the first importance to guard against. Hence we find the English gardener reducing the roots of all plants to one type—that of the fibrous-rooted, that they may not penetrate to so great a depth as to be below the influence of the warmth imparted to the soil by the sun's rays.

Here, where in the main the temperature of the earth exceeds in warmth that of the atmosphere, we have followed the example of our English cousins, and received our trees from the hands of nurserymen after the foreign sample. Nor does it appear that we have ever thought it best to inquire into how many natural divisions the roots of trees are divided, nor the reasons which have induced the English to disregard those divisions.

How few either of our orchardists or nurserymen, who have bestowed much thought on the natural requirements of the peach tree; or have for once considered the nature of the roots with which they have to deal? Supposing as is common, that trees with a mass of fibrous roots are such as are best suited to their wants, without recognizing the fact that nature has made the roots of all cultivated trees of two types, viz: the one with tap roots or with its main root extending perpendicularly downward to a great depth, those portions below the soil very much resembling the branches of a tree whose main stem or trunk tapers regularly to the top. This model or type is called deep-feeders or tap-rooted, and to this type the peach root belongs. The other model is known as the forciculated, or fibrous rooted, or surface-feeders, being destitute of the main or tap root, dividing just below the surface of the soil. No models could be devised that would so clearly indicate the requirements of the two classes of roots as those described. This difference in the formation of roots may

be made serviceable to the horticulturist in several ways.

When the trees of both types are planted near each other, each will seek much of its nourishment as though the other was not present. The deep-feeder will draw its food deep down in the soil; the other, owing to the more complete diversion of its roots, branching latterly just below the surface of the soil, reaching out in all directions, without penetrating to any great depth. The surface-feeders will, when growing vigorously, destroy all within their reach.

By a proper mingling of the two, two plants may literally be said to grow where only one grew before. Hence it is in bringing forward an orchard that advantage should be taken of the kind of roots we cultivate.

For example, most persons wish to grow some crop under the trees until they are so far advanced as to take possession of the soil. Only those plants that are of the opposite type should be used.

Corn and potatoes are found to do well among peach trees. Corn, deriving all its food near the surface, is, in all things considered, the best crop to plant, and the one generally employed. It would be far more valuable for the object named than it is, but for the practice so universally adopted—that of forcing the trees to become surface instead of deep-feeders. To this wholesale mutilation and deprivation of the natural structure of the peach tree is due many of the failures and diseases now so common in this country.

This tree, by nature so well adapted to our climate and soil, and so admirably adapted by its peculiar structure to draw its support from a depth rarely affected by drouth, has, by reason of being forced to derive a scanty supply of nourishment from light and sandy soils, after the manner of surface-feeders, become so enfeebled that, in many parts of the United States, where it was formerly vigorous and productive, its cultivation is now nearly or quite abandoned.

The limits of this paper will not admit, and I do not propose if it would, to go into the whole details of planting, but simply to describe, as briefly as possible, my own mode, leaving the more technical points to be brought out by the discussions.

It is of the first importance that the soil should be deep, rich and free from an excess of moisture to as great a depth as the roots of the tree will penetrate. If these conditions cannot be secured, better not plant at all; otherwise the attempt will cost more than the fruit will be worth.

No peach tree should be planted in ground not moved to the depth of at least three feet, and if holes are dug instead of loosening the whole ground, they should be dug out at least five feet in diameter, and filled in with good soil; not less than one wagon-load of manure should be mixed with the earth of six or seven holes, at the time of filling up.

Having your trees ready, and the bruised ends of the roots smoothed off, spread out the roots in the soil where they are to remain, in as natural a position as possible; then fill in the soil, not tramping the soil about them as you proceed, until the excavation is filled even with the surrounding surface. If the tree has been planted in a hole, the earth will settle with the tree, about three or four inches. If, however, your planting is to be done in ground, the whole of which has been deeply

worked, you may put your tree three or four inches deeper than it stood in the nursery.

Since it is true that our chemists agree that barn-yard manure contains all that is essential to the welfare of our fruit trees, you may make as liberal use of it as either your convenience or purse will allow; and that, too, without troubling yourself a great deal about the specific ingredients so much needed in the development of healthy trees.

We should recollect, in pruning our trees, that to the healthy action of the leaves we owe much of our success in fruit-growing. They collect, through the medium of the roots and the atmosphere, all those ingredients so necessary to the vital welfare of the plants. The crude juices taken up by the roots, and all the food they absorb from the air, in them undergo that chemical change from which the structural cells are formed. Most of the improved varieties of the peach have larger leaves than are produced by the healthy seedlings, which will direct your attention to the fact that they must in proportion to their increased size, be fewer in number. They must be carefully cared for. If the tree is showing fruit, they must be so subordinated, by careful pruning until the fruit shall, by the demand on the tree, prevent the further formation of leaves, except at the extremity of the vertical or leading branches, that each individual leaf shall receive its full share of work in the maturing a full crop of large and high colored fruit, and at the same time, provide the extra share of material that is needed for the safety of the fruit germs for the succeeding year.

No art can produce the sugar and certain flavors of fruit due to the agency of light and heat, nor can it impart that degree of health due to those agents. Hence it should always be remembered that no two leaves should be allowed to so far compete for light as to lessen their utmost limits of growth.

One other remark and I am done. Were I called upon to describe two conditions of success of the most importance in the growth and management of the Peach, I should say:

1. Do all in your power to restore and encourage the deep-rooting of your plants.

2. The pruning of the trees on the principle herein described.

To these add continued stirring of the soil during the period of growth the judicious thinning of the fruit, the removal of borers, &c., &c. Other conditions being favorable, your success will be certain."

At the close, the Doctor submitted the following list for orchard planting. These are in the order of the figures annexed:

- | | |
|-----------------------|----------------------|
| 1—Serrate Early York. | 5—George the Fourth. |
| 2—Haines Early Red. | 5—Late Crawford. |
| 3—Large Early York. | 6—Late Admirable. |
| 3—Early Crawford. | 6—Columbia. |
| 4—Bergen's Yellow. | 7—Smock. |
| 4—Old Mixon Free. | 8—Heath Cling. |

The system of deep holes recommended by Dr. Hull, was assailed by several members as not adapted to clay soils or in any other than soils naturally dry like the bluffs along the river, as is the location of the Doctor.

Mr. Colman, editor of the *Valley Farmer*, made an attempt to add several cling peaches to the list, but the taste of members evidently did not run to clings. After various attempts to strike out and

add to the Doctor's list, it was adopted without charge.

Hale's Early was recommended for trial. It is said that this is the earliest peach of the season. Mr. Teas, of Indiana, claimed that it is ten days earlier than Serrate Early York, our earliest peach. Mr. Baker, of South Pass, had fruited it last summer, and found it some seven days in advance of the Serrate Early York, and nearly ten days ahead of Troth's Early, which is the earliest peach sent to the Chicago market in any quantity. In this connection, considerable sparring was had over the value of the Serrate Early York as a market peach. Dr. Hull said its only value was its earliness, and that some of the Serrate (saw-edged) varieties were of little value. The growers from the South part of the State found this variety of no value, and depended mainly on Troth's Early for an early market peach, and they had great confidence that Hale's Early would prove a valuable addition to the list of early peaches.

It may be interesting to state the time of ripening of peaches, as set forth by growers, both at Alton and Cobden.

At Cobden—Hale's Early, July, 1st; Early Tillotson, 5th; Troth's Early, 10th; Large Early York, 15th; Honest John, 20th; Early Crawford, 25th; Coolage's Favorite, August 1st; Old Mixon Free, 10th; Late Crawford, 15th; Lagrange, Sept. 1st; Smock, 5th.

At Alton—Early Tillotson ripens July 5th. By this, planters and others can see what varieties to select for a succession of this delicious fruit.

The rule requiring twelve votes to place any new fruit on the list, was changed to six, and a majority of all the votes cast.

PLANTING AND CULTURE.

The discussion under this head took a wide range, but the conclusion arrived at was that trees should be planted no deeper than they stood in the nursery, and that the ground should be deeply plowed, not less than a foot deep; that deep holes should not be employed unless the soil was thoroughly underdrained, either naturally or artificially. One man would plant one or two feet deeper than they grew in the nursery, but he was soon laughed down as a quack.

Several members came in on the evening trains, among them a large delegation from Cobden.

Several of these members, fruit growers, took an active part in the discussion of the peach. The Alton people admired Haine's Early red, while the Cobden growers have Troth's Early. An attempt was made to prove them identical, but it was not conclusive. If not the same peach they must be very similar. The discussion brought out the fact that peach orcharding has received a new impetus the past year, and that nearly all the peach trees in the nurseries, both East and West, have been disposed of. The Michigan planters have cleaned the East of peach trees, and our own planters the large stocks in this State and Missouri. The prospect is that this fruit will in the course of three or four years be more abundant, if not cheaper.

SECOND DAY'S SESSION.

ALTON, Dec. 16, 1863.

This morning Alton came out in the regal robes of winter, dashing as a belle, but without the sleigh-bells so necessary to realize the poetry of the occasion. The seven inches of snow lay soft and fleecy, but as no sleighs came, the weather king became disgusted, and the result has been a drizzling rain all day, and by to-morrow, if this state of thing continues, the city will be bathed in mud.

MORNING SESSION.

A letter was read from Gen. Willson, of the State Board of Agriculture of Iowa, asking information in regard to certain parties from Illinois selling White Willow cuttings in Iowa. Yesterday a committee was appointed to report on the subject, and they say they do not know the parties named, but as they have the evidence that thousands of willow cuttings were taken from our swamps and creek bottoms last winter, and sold for the White Willow, it stands our Iowa friends in hand to be careful of whom they purchase, and to see that the parties can give good references.

A letter was read from Mr. Henry Ware, of Marblehead, Massachusetts, stating that he grew, on fourteen acres, seven thousand bushels of onions of the Danvers silver skin variety. Mr. W. suggests that onions can be cheaply and certainly grown on the prairies. The new lands are clear of weeds, and we should pay more attention to the crop.

The committee made the following

REPORT ON THE PRESIDENT'S ADDRESS.

The committee to whom was referred the President's address respectfully report that, highly appreciating the spirit and sentiments of the address generally, they are specially bound to report for the expression of the Society, the resolve that we most earnestly urge the formation of Horticultural Associations in towns, counties, and large districts all over the State, that through them we may learn the comparative value of each fruit in the different parts of the State, under the modifying conditions of climate, soil, and situation.

We recommend further, a vote of thanks to the Horticultural Society at Rockford for their generous and most complete arrangements for the fair of this society, held there last September. To them is justly due the credit of those measures that resulted in such gratifying success to our cause.

We further note as worthy of your attention, the information that an insect has been discovered capable of subsisting on the leaf of the Ailanthus, and producing, without care or protection, a silk of good quality. We recommend the appointment of a committee to inquire into the matter, and report to this Society at an early day.

We report further to you, that we note with regret the persistent refusal of the managers of the Illinois Central Railroad, and Terre Haute and Alton Railroad, to extend to the members of this Society the courtesies awarded by most other roads

to all organized associations laboring for the benefit of the public. And we here enter and record our solemn protest against such a policy, as most unjust and oppressive to us, as we have been and are laboring gratuitously, at a heavy expense of time and means, for the development of those resources of our common country that already have, and in the future will still more, abundantly increase the revenues of these railroads.

The report was adopted.

A Committee consisting of Messrs. Overman, Earle, Flagg and the President were appointed to confer with the railroad companies in regard to the above subject.

DR. LONG ON THE PEAR.

Seekel, hardy and profitable. Oswego Buerre blighted the fifth year; would recommend it for further trial, as it is a valuable pear. Buerre Bose, all dead the second year. Urbanist blights slightly. Steven's Genesee, blights badly and is tender; although a fine fruit is not hardy enough for Alton. Tyson, would try it further. Belle Lucrative, bears young: fruit fine, but blights to some extent. Rouselet de Stutgard is an excellent pear and suffered but slightly. Chaptel, a fine grower and rather large fruit; affected this year for the first time. St. Andre, hardy as is also Fig. Forcella, Buffum, Bastizier, Beurre Dial, badly blighted. Henry the Fourth, hardy and a good bearer. Swan's Orange killed. Flemish Beauty highly cultivated; killed the second year; those on uncultivated land hardy. Glout Morceau killed. Duchess de Angouleme, hardy on poor soil. Vicar of Winkfield, all dead. Louise Bonne de Jersey, a profitable fruit; only slightly affected. Howell, hardy and promise well. Passe Colomar, fruit fine and tree hardy. Lawrence the same. Bartlett, profitable and little affected. Kingsissing, hardy, fruit poor. Napoleon, hardy, bids fair; fruit sells well. Madaline, hardy and profitable. White Doyenne, bears well and is profitable. Doyenne de Ete, produces well and is hardy. Grey Doyenne, hardy but not profitable. Beurre Clairgu, hardy, fruit very large. St. Ghislain, hardy and profitable. Sheldon, hardy and bears well. Ott, a good pear. The above trees were planted in the spring of 1857, giving seven years experience.

The committee reported apple list, which by common consent were to go on the minutes without discussion. At the next meeting we shall have the fruit list from the entire State, and the Society will then know more of the subject, and be able to agree on a list.

APPLE LIST.

LIST FOR NORTHERN ILLINOIS.

For Market.—Red Astrachan, Red June, Keswick Codlin, Early Pennock, Sweet June (Hightop Sweeting of Downing), Snow Apple, Bailey's Sweet, Maiden's Blush, Fall Swaar, Lowell, Striped Gilliflower, (probably Scolloped Gilliflower,) Ramsdell's Sweet, Yellow Siberian Crab, Winesap, Rawles' Janet, Domine, Willow Twig, Gilpin (Little Romanite), Minkler (probably same as Brandywine of Adams county), Tolman Sweet, Yellow Bellflower and Northern Sweet.

Family Use.—Early Harvest, Red June, Keswick Codlin, Benoni, Hocking, Sweet June, Snow, Bai-

ley's Sweet, Maiden's Blush, Fall Swaar, Autumn Strawberry, Holland Pippin, Lowell, Rambo, Striped Gilliflower, Dyer, Mother, Haskel's Sweet, Yellow Siberian Crab, Fulton Winesap, Rawle's Janet, Domine, Jonathan, Tolman Sweet, White Winter Pearmain, Westfield Seekno further, Roman Stem, Northern Spy, Swaar, Ramsdell's Sweet.

For Trial.—Kirkbridge White, Duchess of Oldenburgh, Fall Orange, Northern Sweet, Fall Wine, Montreal Beauty Crab, Transcendant Crab, White Pippin, Paradise Winter Sweet, Ben Davis, R. I. Greeniug.

FOR CENTRAL ILLINOIS.

For Market.—Early Harvest, Golden Sweet, Maiden's Blush, Bailey's Sweet, White Winter Pearmain, Domine, Winesap, Ben Davis, Willow Twig, Rawle's Janet, Newtown Pippin, (on limestone soils, with high cultivation.)

Family Use.—Yellow June, Early Harvest, Sweet June, Red Astrachan, Keswick Codlin, Golden Sweet, Ramsdell's Sweet, American Summer Pearmain, Benoni, Red June, Maiden's Blush, Fall Wine, Buckingham, Bailey's Sweet, Fulton, Hubbardston, Nonesuch, Fall Swaar, (of the West,) Snow, Domine, Jonathan, Pryor's Red, Swaar, White Winter Pearmain, Roman Stem, Peck's Pleasant, Esopus Spitzenburgh, Winesap, Ben Davis, Rawle's Janet, Newton Pippin, (on limestone soils,) White Bellflower, Lady Apple.

For Trial.—Early Joe, Downing's Paragon, Rome Beauty, Ladies' Sweet, Sweet Romanite, White Pippin, Nickajack.

LIST FOR SOUTHERN ILLINOIS.

For Market.—Early Harvest, Red Astrachan, Red June, Yellow Bellflower, Rawles' Janet, Winesap, Newtown Pippin, Pryor's Red.

Family Use.—Early Harvest, Large Yellow Bough, American Summer Pearmain, Rawles' Janet, Yellow Bellflower, Pryor's Red, Newtown Pippin, White Winter Pearmain, Buckingham

For Trial.—Yellow June, Sinequanon, Benoni, Porter, Rome Beauty, Willow Twig, Nickajack.

Had the above list been discussed, it would probably have been somewhat modified, but it now stands on simply the reports or recommendation of the several committees. The reasons for not discussing this, are found in the fact that over five hundred circulars are out asking for lists for the above purposes. Returns have been made from thirty-six counties, and it is expected that the whole State will be represented. These lists will appear in the transactions, and must prove highly valuable. Dr. Warder has his Western Fruit Book nearly ready. It was therefore decided to leave the apple list in this shape at present.

Orchardists have quit planting everything that the nurserymen are disposed to send them, and now demand certain varieties only. Of these choice varieties, the nurseries are pretty well exhausted, and they cannot be purchased below the usual retail prices, even when wanted by the thousand.

Two different apples have been sent from the south part of the State, under the name of White June, one of which is Kirkbridge White. The former is the first ripe, but is a dry fleshed apple, only valuable for its earliness.

PEAR BLIGHT.

This subject was now taken up and considerable talk had over it, a portion of which we give:

Dr. Schroeder—trees near wells; over drains; in all condition of shelter blight more or less. He believed that the cause to be a species of itch (scabies) that affected the bark. He would call it tree itch.

Colman—We must look for a remedy, the disease is inherent like the whooping-cough in children; he would cut back, and thinks root pruning would prove valuable. Dr. Long is in error in planting on poor soils. It won't do; he plants in rich, well prepared, and thoroughly cultivates; succeeds well in his land, which is a heavy clay. Husmann has had good success with the pear on high land, and moderately so on bottom or low lands. He thinks to maintain the health of the pear, it should be cultivated early in the season, and to stop the growth as early in the latter part of the growing season as it is possible, in this way the wood ripens up freely, and the trees winter well. What we fear most is a late growth, as that leaves the wood in a bad condition to enter the winter, and the result is blight. He never cultivates very high nor late in the season; cuts back in summer when the growth is too rampant. On the high land the crop is certain, as that of the apple—has annual crops.

Dr. Clagget would corroborate Mr. Husmann. The rampant growing pears suffer most, but this damage depends on the condition of things. A late growth sometimes escapes, while at other times a different result follows.

He had paid some attention to Mr. Pettengill's theory of cutting off the outside bark of the pear tree, and in many instances with good results, and he believed that there was value in it. Thinks there are two kinds of blight, one of which is frost or frozen sap blight, and which is the more common. It appears in all situations, though some varieties are more liable than others.

Seckel and Winter Nellis are more hardy than most pears. The summer blight is another thing, but not so common; can see the blight in the bark by the patches of dead *dermis*, which should be shaved off at once, and in most cases will save the tree. He finds pears very profitable, notwithstanding the blight; cultivates high and manures.

Johnson, of Adams county, had grown the Catherine pear for several years; had scraped off the outside bark, *dermis*, and applied a paint of lamp-black and spirits of turpentine with the best results, as all the trees revived and are now healthy.

Douglass does not think the blight caused by the itch, as alleged by Dr. Schroeder; it is in the circulation, and the skin. Believes in stopping growth in July. This will save it from winter injury. Underdraining is valuable.

Bryant had suffered from the blight more or less for the past twenty years. He had, at different times, different theories on the subject, but now he confessed he knew nothing of it; he did not think that any progress had been made in this direction. He should continue to plant dwarf pears; give them good culture so as to get as much fruit from them as possible before they die with the blight.

Galusha would check the growth by sowing oats, the latter part of summer, thickly about his trees.

The debate was closed by appointing Dr. Claggett, Dr. Schroeder, Mr. Shepherd, Mr. Douglass, and Mr. Hull, a committee to report further on the subject at the next meeting of the Society.

Messrs. Douglass, Anderson and Bryant, of Northern Illinois, Overman, Minier and Hull, for Central, and Baker, Flagg and Earle for the South division, were appointed to report a list of pears on the same plan as that adopted for the apple.

AFTERNOON SESSION.

The pear blight was still the theme with members, although not formally before them, but in a sort of desultory way.

The whole subject is a mystery, and we are willing to accept the views of Mr. Bryant, one of our oldest and most careful pomologists. In common with many others we have learned to look to him for valuable advice, and now after having studied the above subject for twenty years without lifting the veil from the mystery, we must pause, and seek the cause in some other direction.

At all of our winter meetings this subject has been brought up, and warmly talked over, but no remedy has been discovered. All sorts of remedies have, at times, been supposed efficacious, but none answer the second time. We have no faith in any yet proposed, not even that of Mr. Pettengill, in that of scraping off the outside bark, nor that of Mr. Johnson. We have trees that have recovered as remarkably as his, without any application, that have bore full crops the past six years.

Essay on Blackberry Culture—By N. J. Colman of St. Louis.—The essay takes the ground that the Lawton or New Rochelle is the only variety worthy of attention. The Dorchester and Newman's Thornless as worthless. This doctrine in regard to the Lawton, is doubtless good for St. Louis, but planters at the North and Eastern part of the State want a more hardy plant.

He plants in rows eight feet apart, and the plant two feet apart in the rows. The new plants should be allowed to grow like a hedge row, and the space between these hedge rows kept clean by cutting down the intermediate canes. In the season of growth the canes are cut back to about four feet, and the new shoots should be cut back as they appear. This is the best plan that we have seen to grow the fruit.

The Minority report of the Committee from Northern Illinois, on apples, by O. B. Galusha, protesting against the Little Romanite, was received and placed on file for publication.

Mr. Galusha takes the ground that we send no poor apples to market. That none but the best should be grown, so as to correct the public taste for such apples as the Maiden's Blush, the Milam and Little Romanite.

This is all very well, yet, these fruits will continue to be grown so long as tastes differ. Mr. G. is in favor of the Rawles' Janet at the North, an

apple that in that location we have never seen in good condition, and which is to our mind less valuable than the Milam, neither of which we would plant largely. So long as cooking apples are in demand, so long will the Little Romanite hold a place in the orchard. It is a profuse bearer, keeps well under almost every condition and in spring when other apples are not plenty is in demand for cider and for cooking, and at that time is not very bad to eat, as thousands will testify who travel through the West during the spring months, when the train boys have few other apples to sell.

Essay on Native Forest Trees—By O. B. Galusha.—American Arbor Vitæ is recommended for screens. He estimates the cost of a screen of a double row, half a mile long, at one hundred dollars at twelve years old. Norway Spruce is probably the best of all the conifer family for screens. Early spring is recommended as the best time to transplant.

Among those that are the most valuable are:

Yellow and White Willow, White and Ash Leaf Maple, Red and White Elms, Yellow, Black and White Birch, Blue and White Ash, Lombardy Poplar, and the Black and White Walnuts.

He looks upon the White Willow as the most valuable of this list.

All of these are valuable in protecting crops from high winds, as well as the orchards and house grounds, and should be placed on every farm.

Mr. Overman moved that 10,000 copies of the address be printed and distributed. This was debated, and withdrawn, and the manuscript placed on file.

Box Alder.—Smiley Shepherd made a report in regard to this tree for sugar making. He found the sap nearly as rich and abundant, and identical with that of the sugar maple. Recommends it for wind-breaks and timber, and further trial in regard to its value for sugar.

We need not say that a recommendation coming from Mr. S. is of the highest value.

We intend to set a few hundred plants in the spring.

Mr. Galusha had a sample tree on exhibition, and also distributed packages of seed; he also has the plant and seed for sale. He said of this tree, that "The sap is rich in saccharine matter; is hardy, can be tapped in from six to eight years. The sap of this tree is as rich as that of the sugar maple and as valuable." He thinks that it will be largely planted for shelter belts and for sugar. When set for sugar, set sixteen feet apart and cultivate with care for a few years.

Essay on American Wine—By Geo. Husmann of Hermann, Mo.

This essay was particularly interesting and valuable, but too long to copy.

Wine-making is simple; but first, we want good, well ripened grapes; second, good, clean casks; third, vats; fourth, mill. This last will cost about seventy dollars.

Norton's Virginia is put at the head of red wines, and sells at \$2 50 per gallon.

Clinton makes a good claret wine.

Delaware makes a wine of great body, and well suited to the taste of Americans, but not sufficiently acid for Europeans.

Catawba wine is sold at \$1.50—a good wine.

This country, within the next fifty years, will produce more and better wines than that of all Europe, in which all tastes will be gratified.

Dr. Schroeder on Vegetables.—Adam was the first gardener; Noah packed his garden seeds in the ark; Abraham brought the system in good shape, but the Israelites, while in Egypt, neglected the art. The old Romans brought the art to a high perfection, growing cauliflower seven feet and two inches in diameter.

The Dr. was down on meat eaters. They were ever hard drinkers, and did other naughtier things, while the vegetable eaters drank wine, make good husbands and good citizens. We could not follow the Dr. in his remarks, half English and half German, with a style peculiar to himself; besides this the house was kept in a roar.

EVENING SESSION.

ALTON, ILL., Dec. 16.

Most of the evening session was occupied in listening to the eulogy, by Arthur Bryant, on the late Dr. John A. Kennicott, and to a biography of the same by C. D. Bragdon, both of which papers were very able. As they will appear in the transactions, we will not attempt a synopsis.

WINES.

We had the pleasure of a place on the Wine Committee. There were twenty-one bottles offered in the several classes, nearly all of which were of high merit.

Catawba Wines of the Vintage of 1862.—In this list were five competitors, or rather samples.

No. 1—Engleman of Bellville. No. 2—V. Huff, of Bellville. No. 3—Dr. Feldman, of Hermann, Mo. No. 4—W. C. Flagg, of Madison. No. 5—V. Huff.

All of these samples were of excellent quality, and it required no small amount of tasting and re-tasting, to decide the nice difference between them. They finally stood No. 2 best, and No. 3 next best.

Catawba of 1863.—No. 1, M. Paeschel, of Hermann, and No. 2, F. Kuhn, of the same place. The award stands in the order above. Those samples were decided excellent for new wine.

Concord Wine.—No. 1, M. Paeschel, of Hermann, Mo.; No. 2, Wm Paeschel, of the same place; No. 3 Geo. Husmann, of the same place. All of these samples are of the vintage of 1863, and of course new wines.

This is the first time that the wine of this grape has been introduced in so public a manner, and no little interest was manifest on the subject. The wine was new and rather acid to our taste; not equal to Catawba, but close to it. It is very probable that age will make it a good wine. No. 1 was decided best, and No. 2 next, by a close vote. In fact the samples are almost identical.

Delaware Wine.—One sample of Wm. Paeschel, of Hermann vintage of 1863, is too new to judge

well of its merits, but was decided that it was inferior to the Catawba. The wine is of a beautiful, nearly transparent color. It is evident that some other grape must be mixed with it to make it what it should be. The committee were disappointed in this sample of wine.

Cassady.—One sample from Geo. Husmann, of Hermann vintage of 1863, is a wine of good promise. Three samples of unknown, but of new and of medium quality, one of which was doubtless Clinton, a very good claret, made by Dr. Edwards of St. Louis.

Isabella.—One sample of Isabella, as good as can be made from this grape. This grape must go out of the wine grape list.

Norton's Virginia and Concord.—One sample made of the above grapes mixed. From M. Paeschel, of Hermann vintage of 1863.

Herbimont and Norton's Virginia.—This is a first rate wine, and fully confirms what the Hermann vine growers claim—that these grapes must take a high stand. On comparing these two samples, the committee decided in favor of the mixture of the Concord as the best.

Norton's Virginia.—No. 1. From M. Paeschel, of Hermann.

No. 2. From Geo. Husmann of Hermann.

No. 3. From F. Kuhn, of Hermann.

These were all good samples, but No. 2 took the preference.

The best wine on the table was decided to be Norton's Virginia and the Concord.

The above fact is of no small importance to our State, for in it we have two grapes for the table that, for ease of culture and abundance and certain crops, stand out first and foremost, while both of them combined make a superior red wine—a wine superior to what either would make separately.

DELEGATES ABROAD.

Indiana State Horticultural Society.—Messrs. Dr. Schroeder, Phoenix and Overman.

Ohio Pomological Society.—Messrs. C. D. Bragdon, J. H. Stewart and Dr. Schroeder.

Missouri State Horticultural Society.—Messrs. Flagg, Dunlap and Starr.

PRUNING OF APPLES.

For Northern Illinois: Messrs. Galusha, Whitney and Murtfeldt.

For Central Illinois: Messrs. Stewart, Dunlap and Dr. Hull.

For Southern Illinois: Messrs. Baker, Finley and Hadley.

The following Committee was appointed to meet with the Industrial Convention at Springfield, January 5th, 1864:

Messrs. Minier, Dr. Andrews, Galusha, Murtfeldt, Prof. Turner, Dunlap, Dr. Hull, Quick, Flagg and Hadley.

WHITE WILLOW FOR FENCE POSTS.

The above subject was somewhat debated to-day, in which Mr. Galusha estimated that eighty acres set with willow, on land costing ten dollars an acre, will cost at twelve years old \$4,044, or about fifty dollars an acre, and providing posts at least than two cents each. Mr. Overman, who is enthu-

siastic on the subject, said he had seen White Willow in good order after having been used twelve years. These did not sprout, but had been set in low ground, and remained nearly sound after twelve years. The impression was that this timber would decay very rapidly, but the truth is, very little was known in regard to it by the members. Should it prove durable by the use of gas, tar or other chemical that can be cheaply applied, it will prove valuable to the grape grower, who must needs use a great many stakes. It should be largely planted in low land, and if it won't last well for posts, it will make good fire wood.

THIRD DAY'S SESSION.

ALTON, Dec. 17, 1863.

MORNING SESSION.

The morning sessions have been opened with prayer, the city pastors officiating.

Messrs. Warder, Hull, Dunlap, and Schroeder, were appointed delegates to the American Pomological Convention to be held at Rochester, New York.

GRAPES.

Dr. Warder read an essay on grapes, now attracting more attention than any other fruit.

In the culture of the grape, the soil must be worked deeply, either by trench, subsoil plowing or with the spade. The land must be made rich, old bones should be deposited in the trenches or bottom of the holes, in planting the vines. Good drainage for this fruit is of the utmost importance, or, as the Doctor says, is a *sine qua non* in grape culture. If you cannot drain, build up the grape border above the surface bed, with rich soil and compost. In this way every farmer, every cottager, can have an abundance of this health-giving fruit of his own growing.

The Doctor recommends the use of the double Michigan plow, to be followed by Mapes' lifting subsoil plow. The vineyards of the steep hill sides of Cincinnati have cost six hundred dollars the acre in spade trenching and training; but this, as a general thing, has not paid well, and it has been found that land prepared with the plow produces equally well, at a great saving of cost in the outlay of a vineyard—a point not to be overlooked in this connection.

The soils along this river are most admirable for the grape, and must in time stand high in grape culture. The great body of water of the river has a modifying effect. The Springs are somewhat later, and when Summer comes, the vines grow right along, and are nearly exempt from frost. Of aspect, the Doctor says that some grapes can be grown even on the north side of hills. The direction of the rows should run north and south, so as to give all sides of the vines the benefit of the sun. On steep hill-sides this is more difficult.

The distance to plant is another thing not to be overlooked. We plant too close, but are now improving by making the rows eight feet apart, and the plant six feet in the rows, and some varieties need even more space.

In training, the renewal system of pruning must more or less be adopted, or at least a modification of the system. The simplest form of training is the bow system. The most stupid laborer can be easily learned how to do this. Trellis training is more difficult than the former, both are valuable systems.

In summer pruning, the early pinching back of the lateral is doubtless the best.

It is certain that various modes of training will succeed, if we bear in mind that the fruit is produced on the previous season's wood.

The Isabella and some other varieties do not ripen well when cut back to the bow system, and must be allowed to run at large.

Grafting the grape is but a poor mode of propagating the vine, as the connection is not a good one. He would not recommend it.

The propagation from single eyes is a most excellent mode. Long cuttings are not so much used as formerly, and we now make them short.

Stakes are cut seven feet long and driven into the ground a foot. In case of high winds, when the stake blows over, it does not carry the whole trellis with it.

In cultivating, the soil should be well stirred early in the season, and neglected late in the season. In some cases a strip two feet wide in the middle of the rows, is sown with clover and mown several times during the season, and used as a mulch. This plan is doubtless a good one, and is not so expensive as at first sight might be supposed.

In regard to the diseases of the grape, too little is known to take up the subject.

The essay was listened to with marked attention and the Doctor was plied with numerous questions.

The culture of the grape is taking a deep hold on planters, and no branch of fruit growing is being pushed so vigorously. J. H. Stewart, will set four thousand of the Delaware in the spring, in fact, notwithstanding the slow growth of the grape, and its unpromising condition in many localities, every plant will be set. Mr. Stewart sold some five thousand cuttings of the Delaware at the meeting, at twenty-five dollars a thousand, which will show something of the demand for this grape alone.

A discussion on varieties followed the essay.

DELAWARE.

Husmann said he would select or reject only for his own location. The question of varieties is one of local importance only. At Hermann this grape has not met our expectation—it is liable in autumn to leaf blight. He prefers to graft it on a vine of the Norton's Virginia. Has three hundred and fifty vines. It grows from cuttings; use three to four buds on each cutting, though a common way is to use layers.

CONCORD.

Colman says this is one of the best—the variety for everybody. It makes a good wine, and when mixed with the Norton's Virginia, makes the best wine, better than Delaware wine. It is the grape

for the million. Douglass considers this the best grape next to Delaware.

Several followed, all commending this grape for hardiness, and great crops. Dr. Warder and others say that it has a short season and does not keep well when shipped, and some day will give place to some other sort.

CATAWBA.

Colman would strike it from the list for general cultivation. Hunter would not strike it off. It is too valuable. Motion to strike it off the list was lost.

DIANA.

It was moved to add this grape to the list for general cultivation. Dr. Humbert, of Alton, considered it worthless. Sherman says it does well at Rockford. Dr. Edwards says it is a good grape—vine hardy. The vine needs age to mature it perfectly. Colman says it does not ripen well. Dr. Andrews says it does well. It keeps the best of all our grapes. Young vines do not ripen the fruit so well as they do on the old vines. The motion was carried.

AFTERNOON SESSION.

List of pears for Northern Illinois, as reported by the Committee:

For Market—Bartlett, Flemish Beauty, Louise Bonne de Jersey.

Family Use—Doyenne d'Ete, Osband's Summer Bartlett, Flemish Beauty, White Doyenne, (standard and dwarf,) Belle Lucrative, Louise Bonne de Jersey, Sheldon, Howell, Seekel, Beurre de Anjou, Urbanist, Lawrence (dwarf.)

For Trial—Beurre Gifford, Beurre Clairgeon, Tyson, Onondaga Beurre Hardy, Duchess de Angouleme, Beurre Dial, Winter Nellis, Doyenne de Alencon.

Pears for Southern Illinois:

For Market—Doyenne d'Ete, Bartlett, Fondonte d'Automne, White Doyenne, Louise Bonne de Jersey, Duchess de Angouleme.

Family Use—Doyenne d'Ete, Rostizer, Bartlett, Fondonte de Automne, Howell, Seekel, Duchess de Angouleme, Easter, Beurre Tyson.

For Trial—Osband's Summer, Beurre d'Arigon, Glout Morceau, Bloodgood, Lawrence, Onondaga.

It appears that the Committee could not agree in regard to dwarf and standard, and presented the list as above.

ELECTION OF OFFICERS.

The election was harmonious, and of course soon disposed of as follows;

President—Smily Shepherd.

Vice Presidents—District No. 1, J. Periam; 2d, C. N. Andrews; 3d, A. R. Whitney; 4th, J. H. Stewart; 5th, W. A. Pennell; 6th, J. C. Dent; 7th, M. L. Dunlap; 8th, P. M. Colman; 9th, C. C. Sturtevant; 10th, J. Huggins; 11th, Chas. Kennicott; 12th, E. S. Hull; 13th, T. J. Evans; at large, O. B. Galusha.

Corresponding Secretary—W. C. Flagg.

Recording Secretaries—C. W. Murtfeldt and Parker Earle.

Treasurer—C. H. Dimock.

Executive Committee—G. W. Minier, S. Shepherd, O. B. Galusha.

On motion of Dr. Long, the common chestnut was added to the list of the deciduous trees. The Doctor stated that he had measured several to-day that had been nine years transplanted, and measured from seventeen to twenty-eight inches in circumference.

EVENING SESSION.

O. W. Hoff, of Augusta, Hancock county, delivered an essay on fruits and their association.

The apple called the New York Pippin, in the lists of fruits, being known in Downing's Fruits as the Ben Davis, it was voted to change the name in accordance with Downing.

The time and place of holding the next Fair of the Society was referred to the Executive Board, with power to act.

The same disposition was made of the time and place of holding the annual meeting.

STRAWBERRIES.

Dr. Schroeder has planted this fruit in his vineyard, but has found it a bad practice. He would recommend Early Scarlet, Longworth's Prolific, and Willson's on high land; on low lands, Triomphe de Gand, Jenny Lind, Extra Red. The land must be plowed deeply to guard against drouth, and to furnish plenty of food for the plants. Thinks we can grow three times as many bushels of strawberries as corn.

Colman, cultivates for market—plow deep with trench plow. Willson's is more productive than Longworth's Prolific. The Willson is the best for market, as it carries so well, and improves during the time of handling, as it becomes more fully ripe on the route. The Triomphe de Gand is not a good shipping fruit—too soft. Don't plant on meadow land just turned over, as the white grub may destroy your plants. Plant early in spring, and renew plantations often; ship in drawers, holding one bushel each.

Booth, plants Longworth's Prolific, McAvoy's Superior and the Iowa as a fertilizer. Mulch with leaves and shavings. Would recommend Mr. Colman to feed his grubs on manure. He finds that McAvoy's Superior to ship in good order, although it is a soft berry, yet it always arrives in Chicago in good order.

Stewart had grown for market for ten years. Must have the clay on top, trench with the spade two and a half feet deep; never manure; mulch in winter with straw. Willson's best for market—renew the plantation after three years, as the plants do not do well after three years. Ships in drawers. Plants a foot each way and keeps off the runners. As the subsoil is at top we have few weeds. Top dresses with ashes—gets three crops and then renews. Bragdon said too little attention is paid to the mode of shipping—fruits must reach the markets in good order if you want good prices.

Booth ships in half-bushel boxes. The material costs six cents each, and we make them at leisure times. These are sold with the fruit.

Mr. Mudd thinks we need the clay, and to get it must trench plow, or trench with the spade.

Dr. Warder would plow deep with the double Michigan plow, and add to this the subsoil plow, stirring the soil very deep. He now believes in keeping down the runners, and to use the staminate plants, and would mulch with straw. The

plants will come up through this straw in the spring. Willson's Albany is a poor berry, and should be kicked out. The Halleck box is the one he prefers to ship in.

PLUMS.

Dr. Hull said that plums can be grown in all parts of the State, that it is too late in the day for us to be driven from the field by insects. The curculio can be shook from the trees at little cost. He grows abundant crops annually.

The apparatus used is made of cotton cloth in form of an inverted umbrella. This has a slot in the side so that it will enclose the tree, when a slight jar on the tree brings down the insect, when he is destroyed. This form is made to correspond to the size of the trees, but not to exceed twelve feet in diameter. It is placed on a sort of wheelbarrow.

It is the curculio that lays its eggs in the peach, which produces the worm that is so often found in the fruit from the south part of the State. The use of this insect catcher in our peach and plum orchards will add thousands of dollars to their value. Dr. E. S. Hull, of Alton, is the inventor—it is not patented.

A FRUIT PICKER.

Elias Hibbard has on exhibition a valuable improvement of this kind that should be more generally in use. It is not patented, and can be cheaply made. No attempt has been made to supply the demand. We used one of them the past season, and found it better than any thing of the kind yet in use.

FOURTH DAY'S SESSION.

ALTON, Dec. 18, 1863.

This morning the newly elected President, Smily Shepherd, took the chair. Mr. S. is a veteran horticulturist. His head is whitened with the frosts of many winters, but his eye is as bright, and his interest in the cause as lively, as the most ardent lover of the Goddess Pomona. If we mistake not, Mr. S. was the first man in the State who attempted the culture of the grape for market. This was some twenty years since, at his residence near Hennepin, in La Salle county. To him the West is indebted for many valuable facts in fruit growing, showing the difference between the soil and climate of the West and that of the East.

The morning was occupied by Dr. E. S. Hull, on the subject of the plum culture, showing his curculio catcher and how to work it. As we cannot describe it without drawings, we will not attempt a further description than that made in our last letter. The implement is not patented, and as yet used only by a few persons about Alton; but the rapid increase of the curculio on the peach, as well as on the plum, will soon bring it into more general notice, and we trust that some mechanic at Alton will yet thrive under the direction of the inventor. We have been personally acquainted with its use for the past seven years, and can bear testimony to its efficiency and great value. With it the entire crop of peaches and prunes can be saved from the ravages of the curculio with but little cost. Every consumer of early peaches knows how this curculio worm deteriorates the value of this excellent, and during July and Au-

gust, rather costly fruit, and anything that will abate the nuisance will be hailed with pleasure. Last year the Doctors trees were oaded with plums, as in fact they have been for the past seven or eight years. In consequence of this successful experiment the fruit growers about Alton are preparing to plant this fruit largely the coming spring.

Plums, which have been ranked with the lost arts in fruit culture, will again appear in market more abundant than ever.

After passing the usual resolutions and providing for the publication of the transactions, the Society adjourned.

Strawberries and Grapes at Pittsburg, Pa.

We give below clippings from a report of Dr. J. A. Warden, of Cincinnati, of his visit to the grounds of Rev. J. Knox, of Pittsburg, Pa. Our readers have heard much said of the success of this gentleman in the growing of small fruits, and it will interest them to hear of the mode of culture by one so well qualified to do it justice.

We wish to call the attention of our readers to one very prominent fact, and that is the growing of staminate strawberries, by cutting off the runners. It has been supposed that all that was worth knowing in regard to this fruit was contained in and about Cincinnati; but here we see a Cincinnati man who has given the world law on this subject, gradually yield the palm to the gardens of the coal smoke city, which has upset the old theory that none but pistillate plants can be made to produce a full crop of this delicious fruit. In the report of the proceedings of this meeting at Alton it will be seen that others besides Mr. Knox keep down the runners and plow deep for this fruit.—The result of this will be in greatly increasing the quantity of this fruit in market.

It will be observed that the Dr. does not so much run to conclusions as in the giving of facts. It is not probable that the trellis of Mr. Knox is the best, and certainly not the cheapest. Of this hereafter.—Ed.

Having recently enjoyed an opportunity of inspecting the plantations of Rev. J. Knox, in the vicinity of Pittsburg, Pa., I proceed to give you some account of his admirable management and of his wonderful success. These experiments of Mr. Knox have demonstrated that he has an excellent soil and situation for fruits, especially for grapes and strawberries, and also that he has known how to take advantage of his favorable surroundings, so as to bring about the most admirable results.

The situation is upon the high rolling land south of the Monongahela river, above which it is elevated between four and five hundred feet. The slopes incline variously, but those looking to the south and west are chiefly selected for grape planting. The soil is a clayey loam, with a liberal intermixture of sandstone, but also has lime enough to im-

pregnate the percolating water. In some places the fissile sandstone constitutes a larger proportion of the soil. This is particularly the case on Troy Hill. Reserve township, north of Allegheny city, where there are numerous vineyards covering nearly one hundred acres, some of which are very precipitous, hanging upon the eastern and southern declivity, supported by massive walls of sandstone built at great expense.

In other places, the tenacious, light colored clayey subsoil of this region, approaches the surface, and intermingling with the soil, makes a strong clay. In some situations under draining is very desirable.

PREPARATIONS—The plow, followed by the subsoil lifter, has been found by Mr. Knox to be all sufficient for comminuting this soil. With a strong pair of horses to the plow, followed by two pair of oxen to the lifter, he is able to work about one-third of an acre per diem. [This is probably intended for the aggregate of the three plowings, and not for each plowing.—En.] This process is performed in the autumn. The ground is next cross-plowed with the same implements, going deeper, and a third plowing is done in the spring before planting, so that the soil is thoroughly prepared, being stirred from a depth of from 15 to 18 inches.

The vines are of a summer's growth, from single eyes that are started in Mr. Knox's extensive propagating houses in the spring, and set out in well-prepared soil about the first of June, for the summer's growth in the open air, which gives them very fine roots, and substantial stocky tops. From this soil they are carefully lifted with their abundant fibres, and are planted in the vineyard ground with their roots carefully spread out in every direction. Sometimes a portion are planted in their stations from the pots directly from the propagating house, instead of spending a summer in the nursery, but such are not considered to be so good though a season is gained by this plan.

The distance between the vines is six feet in rows that are eight feet apart; this is for trellis training upon the renewal system. A small stake is set by each plant, to which the shoots are tied. Instead of cutting the little vines back to two eyes, only the feeble wood at the ends is cut off, leaving several buds on the larger plants, and as these grow the weaker are rubbed out and only the strongest allowed to remain. The reason for this is evident—it is to insure against accidental injury to the prominent buds in handling the plants. During the summer the shoots are tied to the stakes, and the next spring they are cut back to two eyes to force out two strong canes, which are tied up and trimmed of their laterals for three or four feet. In strong vines a third cane is sometimes allowed to grow the second season, the object of which will appear presently.

Training on the trellis commences with the third season of the vineyard, when the stakes are dispensed with. Posts are planted in the rows that run north and south, about twelve feet apart; to these, strips of boards, three or four inches wide, are nailed a foot from the ground, and seven feet above it, these are the rails to which the upright strips, about an inch square and eight feet long, are nailed. These are placed nine inches apart, from center to center. The vines are trimmed this spring so as to form the two arms, each three feet long, from which the fruit canes are to be

produced. In a very strong vine, that had been allowed to produce three canes the previous summer, the third shoot is trimmed to three or four feet for fruiting, and tied upright to the trellis bar nearest to the vine stock, while the arms are secured to the lower part of the trellis. As the buds on these last break, they are thinned out by rubbing off a portion, so that only the strongest are left, and these are so arranged that one of them can be trained to each of the upright trellis bars, each arm, eight to each vine. This we should think a tremendous amount of wood for the third summer, but with the soil and treatment to which they are subjected, many of the varieties of grapes require assiduous labor to confine them to the number of shoots, which reach the top of the trellis, and most of the canes also bear a great deal of fruit. Mr. Knox feels confident that his Concord vines will average ten pounds of grapes the third season. Some other varieties, such as the Taylor or Bullitt and Herbement, grow as vigorously, reaching the top of the trellis, and then stretching along horizontally for some distance; but some kinds do not cover the trellis the first year it is set up. These canes produced from the arms are divested of their laterals during the summer.

The renewal system of trimming is adopted in these trellises, with some modifications, by adopting the spur pruning when necessary, as will be indicated below. In the fourth season from planting and always afterwards, every alternate cane is cut back to two eyes, while the other is shortened, according to its strength and tied vertically to the trellis for fruiting; the spur produces a new cane, so that one spur supports fruit and the other produces wood. If it happen that the cane of last year is not strong enough for the fruiting, it is cut back and that which bore the previous year has its fruit-bearing laterals trimmed to spurs for fruiting, in its stead. In this way, by judicious management, the whole trellis is kept covered with fruit from year to year, and the amount produced is really astonishing, as an instance, I may cite twelve Hartford Prolific vines, which are four or five years old, that produced 620 pounds of fruit this year, from which \$125 was realized—apply this to an acre which supports about 1,000 vines, as planted six feet by eight, and we may calculate the proportionate yield at fifty thousand pounds of fruit, this at the low price of five cents a pound would produce \$2,500 per acre! an incredible yield, and one justifying a large annual outlay in assiduous care and labor.

VARIETIES.

I propose to transcribe a few of the remarks made upon my note paper while passing over the grounds, among the vines, but shall not describe all the varieties in cultivation. The first varieties planted were the *Isabella* and *Catawba*, the kinds then generally cultivated. Both of these are bearing abundantly, the former heavily laden, but not at all the richer for its treatment here, being, as in other places, flat and insipid in comparison with other sorts. The latter less deeply tinted than in more southern latitudes, but producing a magnificent crop of splendid bunches of beautifully perfect fruit.

The *Concord* was in vigor, covering the trellis to the top with foliage and fruit—a perfect show.

The bunches are not uniformly so large as we sometimes see them, nor are the berries equal in size to the stereotype illustrations on nursery-men's catalogues, but the skin is thin, the pulp melting, the juice sweet and abundant, and though the flavor be somewhat musky, not to say foxy, or as some salesmen expresses it, of certain varieties, "with a characteristic native aroma," still it is the favorite with the people, and is selling freely at double the price of the Isabellas and Catawbas offered in the markets. Indeed for general planting at every man's door-stone, throughout the country, this hardy, vigorous and productive variety, apparently free from all the ills of grape-vines, has the highest claims to universal favor. Still, some of us may be allowed to have our preferences for a table grape. For wine, the Concord has begun to assert its claims, and a few samples have already been presented to the connoisseurs, who have pronounced it a promising red wine. A good deal of it has been made at Herman, Mo., this year and Mr. Husmann writes me that the must weighs from 85 to 90.

Next is the *Diana*, which is vigorous and productive the bunch compact, the berries of beautiful color tough skin, and rather firm pulp, juice sweet and having a peculiar flavor, which has been called "feline." The thickness of skin enables this grape to be kept a long time, so as to be on sale in the Christmas holidays—when it commands a high price. The wine from this grape is very highly flavored with the aforesaid *feline*, and though peculiar, and at first perhaps repulsive, it strangely grows on one's affections; it will be valuable for mingling with the juice of some other grapes of less decided character; the *Delaware* itself has been suggested as one that might borrow piquancy from the *Diana*.

The *Delaware* has succeeded admirably in this vineyard, where it has been extensively grown, and with such success as to induce much further planting; Mr. Knox has several acres in course of preparation for vineyard, and extended nursery rows of the vines produced this year, stand ready to be set in their future stations. Whatever complaints may be made of this variety elsewhere, and some of us have had our troubles with the slender little things for which we have paid our money, this vine appears to find a congenial soil upon the coal measures of the Monongahela hills. Three years old plants have made a splendid growth of firm, close-jointed wood, and in many cases the vines have completely covered the trellis, and run along on the top—several shoots were seen of at least twelve feet in length, and in most cases there were more than the regular apportionment of eight canes to the vine, as well as an abundant crop of fruit. This grape has attained so much attention of late years, and is so familiar to the horticulturists of our country, that it is not worth while to describe its beautiful clusters of transparent, rosy berries—thickly spread along the vines. The wine is attracting great attention, and \$5 per gallon has been refused for that made by Mr. Mottier, near our city, who has had perfect success in growing this grape here. The weight of the must with him in September was 102—Mr. Werk's, (probably the first run) weighed 108. The wine sells at \$24 per box or dozen. The vines, once established, bear most abundantly, and the luscious fruit is only too sweet for most palates, as a tablegrape, and to be eaten as honey rather than as food. The fruit sells at Pittsburgh for fifty cents a pound.

The *Union Village* is also quite a successful grape with Mr. Knox; on account of its great size and fair quality, commands a high price, bringing fifty cents a pound. The vine is vigorous and productive, but the fruit is to much like the Isabella to give much encouragement to wine-growers; it is essentially an amateur and market fruit. The excessive growth of the canes on this vine renders it somewhat tender, but I did not hear any complaints in this regard where the growth is diffused upon the trellis, as the canes are not then so rank.

The *Herbmont* showed all its vigor and greenness of foliage even at this late date, making a perfect screen of the trellis, and the numerous large clusters, thickly packed with the delicious, vinous, dark-colored berries, were almost concealed from view. This vine is somewhat tender, and the canes, like those of the *Diana*, are taken down and covered with earth in the winter, but the fruit is so spicy, and so free from pulp, it is fully appreciated by the proprietor, who rates it among the best table grapes.

Its qualities for wine are well known here. The must this year weighs 101.

The *Elsinboro*, an old variety but not generally cultivated, is a prime favorite with Mr. Knox, on account of its hardiness, productiveness, and the rich sweetness of its small, dark-blue berries, with red juice; the bunches are rather large, loose and shouldered. The grape is desirable for table and for wine.

The *Hartford Prolific* is an early variety, ripening its fruit for market early in September. The vine is hardy, vigorous, and very productive, yielding more than fifty pounds at four years. The fruit is not first-rate, but very desirable for market.

The berries do not drop, as reported heretofore.

The *Creveling* is winning favor wherever known.

The vine is vigorous, hardy, and promises to be productive. The bark and leaf-stalks are very red; the foliage is smooth, the angles pointed deeply lobed and healthy. The bunch is loose, the berries rather large, and blue, soft and melting, rather sweet—a fine market variety; ripening at Pittsburgh August 24, it makes a fine market fruit.

The *Tokalon* is moderately vigorous, but does not appear to be very productive. The foliage is good, healthy, angular, pointed and pubescent.

The bunches large, loose, and the berries are rather large, blue, soft and melting. They hold tenaciously to the branch, which makes this grape desirable for late use. It is sweet and not musky; quality from good to better—a table grape. Though well favored enough, it can scarcely be said to justify its cognomen, which means, emphatically, *The Beautiful*.

Since there is a great desire with the public, and especially with amateurs, for white or light colored grapes, they may now be gratified by cultivating several varieties of this character.

The *Taylor* or *Bullitt*, is one of the most promising of this class. The wood is very vigorous, but slender, and of a brown pale color, with some bloom, the joints are rather long, but the canes exceeded the height of the trellis. The foliage is good, angular, serrated and smooth. The bunches upon these young thriftily growing vines, were small and compact, crowded with rather small, green, amber colored, red, and dull red berries, which are melting and juicy, slightly pulpy, wild sub-acid to rich sweet; a very good table grape, ripening September 20.

The *Anna* is but moderately in its canes, but they are firm; the foliage is small, pubescent and disposed to curl and fall. The bunches are scarcely medium and rather close; the berries are from medium to large, round, of a whitish amber color, covered with a thick, white bloom; they are juicy, sweet, aromatic, but the skin is thick and the pulp firm. This is only an amateur variety, ripening the end of September.

The *Rebecca* and the *Coryhoga* have higher claims for our praise, being more refined and delicate.

Both of these are desirable amateur varieties, the former rather bearing the palm of excellence in the opinion of most judges.

These are some of the varieties that are now being subjected to the test of fruitage by Mr. Knox.

THE STRAWBERRY BEDS.

After setting the grapes in their stations in the vineyard, Mr. Knox plants the eight feet spaces with three rows of strawberries, eighteen inches apart, the plants being separated from ten to twelve inches; the whole surface is kept perfectly clean with the hoe during the summer, and the runners are trimmed off as they make their appearance. By this means the plants become very stocky and strong. At the approach of winter the beds are covered with clean straw, which protects the plants from freezing and thawing, as a winter mulch. The new leaves and flowers come through the straw in the spring, the fruit is protected from the dirt, and the whole crop is mulched by the decaying straw during the summer. By this means the most wonderful crops of magnificent berries are produced—such, indeed, as must be seen to be realized. The method of shortening in by cutting off the runners, in combination with adaptation of the soil and high culture, makes even the stamens-bearing varieties abundantly productive in his hands. Such kinds as under ordinary treatment are considered shy bearers, producing only an average of ten perfect and well sized berries to an hundred blossoms, are here made to yield 75 per cent; but the stools are so strong, having so many points of inflorescence in each crown, that the aggregate of fruitage is much larger even than the per centage of fruit-producing flowers would make it appear to be.

Thus, in the numerous counts, very carefully made upon the ground last June, I reached the following results: One plant of the *Wonderful* produced 358 blossoms. A plant of the *Bonte St. Julien* had 84 blossoms, which yielded 67 fruits, or .80. *Killey's Goliath* had 64 per cent. of fruit; *Trollope's Victoria*, 52 per cent.; and all of these varieties are considered strongly staminate, and, with the usual culture, they barely yield 10 per cent.

A very extensive investigation by counting in the case of the *Triomphe de Gand*, gave less than 42 per cent. of the blossoms yielding perfect fruit, and yet, so numerous were the flowers on these plants, that the number of resulting fruits was very great, being nearly fifty on several plants; whereas, with common field culture on our soils, this beautiful fruit had proved itself unworthy of culture from its unproductiveness, many plants having no fruit whatever, succeeding a plenteous blossoming.

The enterprising proprietor of these grounds is eminently a believer in progressive horticulture, and spares no expense in procuring new kinds that have promising characters. Among the hundreds

of varieties that have been tested by him he especially recommends the *Triomphe*, *Golden Seeded*, *Hericart*, *Filmore*, *Victoria*, *Wilson*. Of newer sorts the *Russell*, and a plant numbered *Seven Hundred*, possess admirable qualities, and prove the possible development of this fruit in a remarkable degree.

Grape Growing and Wine Making in Hancock County, Ill.

WARSAW, HANCOCK CO., ILL. Dec. 26, '63.

Editors *Chicago Tribune*:

Observing errors in our Springfield dispatch, giving items from my statement of vine planting, &c., please allow me to give you the statistics of grape planting and wine making in Warsaw and its immediate vicinity, from the "beginning" up to date. There were planted here:

In 1855.....	20 vines.
In 1858.....	101 vines.
In 1859.....	656 vines.
In 1860.....	3,929 vines.
In 1861.....	3,135 vines.
In 1862.....	2,365 vines.

Total up to 1863..... 10,206 vines.

In 1863 there were planted here, 65,000 vines. The first wine made here was in 1861—86 gallons. In 1862, 1,138 gallons were made, in 1863, 1,770 gallons. But Nauvoo is far ahead of us in grape culture. There were planted in Nauvoo prior to 1863, about 90,000 vines, and in 1863 they planted about 100,000 vines. Their crop of 1862 was about 25,000 gallons, and of 1863, has been estimated at about 50,000 gallons, worth from \$1 50 to \$2 00 per gallon. It is also estimated by Nauvoo grape growers that 100,000 vines were planted in the country round about Nauvoo during 1863. In the neighborhood of Bascoe, on Bear Creek, there has also been considerable grape planting by a French settlement—as well as in other parts of the county. By the foregoing statement you will see that the grape interest in Hancock county, though now in its very infancy, bids fair to become an important and profitable business.

The number of vines planted in our county up to date may, I think, be estimated as follows:

Planted in Nauvoo prior to 1863.....	90,000
“ “ in 1863.....	100,000
“ County near Nauvoo in 1862.....	100,000
“ Warsaw prior to 1863.....	10,000
“ “ in 1863.....	65,000
“ Bear Creek and other parts of the county.....	35,000

Grand total..... 400,000
making the number of vines now planted in our county, 400,000. There will be large numbers added to this total during the coming year. Respectfully yours,
N. W. BLISS.

PACKING GRAPES FOR MARKET.—The following is from the proceedings of the New York Farmer's Club:

One of the most interesting features was a fine show of grapes from the Rev. J. Knox, Pittsburg, Pa., which, notwithstanding their long railway journey, appeared as fresh and well covered with bloom as though just from the vineyard. Perhaps

the secret of this is worth knowing. The grapes are transported in shallow baskets, upon the bottom of which green grape leaves are placed, and also against the sides; then a layer of bunches, and then more grape leaves, and so on, and leaves on the top, upon which the lid presses and holds all firmly, but does not prevent the free circulation of air. In this way Mr. Knox sends grapes five hundred miles to market in perfectly good order.

THE YEDDO GRAPE.—A young vine of this new wonder was shown at the late Penn. Hort. Exhibition, from the Hon. Isaac Newton, Commissioner of Agriculture at Washington, who has now growing in the garden of the Department a number of vines. It has a leaf more like some of our native than the foreign grapes, and may possibly prove hardy. What the merits of the fruit are, is only known from what has been already recorded in our pages, from Mr. Fortune, who introduced it to English gardens. These vines will probably be distributed among our prominent nurserymen for trial.—*Hovey's Magazine*.

—Should the Commissioner have any of these vines for the West, we should be pleased to put them on trial, both under glass and in the open ground. We have our arrangements made for a somewhat extended culture of the vine, and intend to give all the new sorts that promise well a trial.

Grapes in Iowa.

Burlington, Iowa, made 25,000 gallons of wine in 1862, and about the same in 1863. Fort Madison made in 1862 some 31 000 gallons, and a much larger quantity in 1863, amount not yet ascertained by me.

THE CONCORD GRAPE.—We notice that this grape, so much underrated by some of our pomological Magi, has so rapidly forced its way upon its own merits that it is now to be found for sale at all the fruit stores of this city. It is always prominently displayed, with large signs informing the public of its name. They have been so displayed for sale for nearly four weeks. Nobody is dissatisfied with this grape, who is not prejudiced. True, it is not equal in quality to the Delaware; but with all the boasted superiority of the latter, who has seen it offered for sale in a similar way? It may be so offered, but we have not yet encountered it in our walks.—*German town Tel., 30 th ult.*

GOOD SORGHUM CROP.—H. & D. McWilliams, near Pontiac, in this State, report that they harvested last fall three acres of Sugar Cane, which yielded 609 gallons, or 203 gallons to the acre. Considering the bad season, this is an excellent yield. The ground was common rich prairie, considerable distance from timber. It was plowed early in the spring to a depth of six inches, and well harrowed. The seed was well sprouted before planting, which was done early in May. The plants were hoed once, and cultivated with a wheel cultivator four times. The cane was not injured by the first frost, and was out of the way of the second.

Culture of the Barberry

Attention has of late been directed, says a contemporary, to the Barberry, as a suitable plant for hedging. Indeed, many believe that this is the plant we have been so long in search of, to make a hardy, durable hedge, and one that will afford all the protection required, and never prove troublesome on account of succoring. E. C. Frost, the well-known nurseryman of Havana, Schuyler county, furnishes the following information on the mode of propagating the plants and forming the hedge:

Seed of the barberry may be picked and planted in the fall in drills, or during the winter, (the berries remain on the branches during the winter, and a portion until it is in blossom the next spring,) or the seed may be mixed with sand or dirt in the fall or winter, and kept out exposed to the changes of the season, and planted in the spring.

The plants may be set for the hedge, one, two, or three years from the seed, nine to twelve inches apart, either in the fall or the spring.

Each spring, sprouts start from the cellar, at the ground, and grow higher and stronger than those of the preceding year, until the plant is, in our soil seven to eight feet high—each year's growth thickens and strengthens the bottom of the hedge.

It should not be trimmed or pruned at any time when young or old. The single plant or hedge is fan-shaped, upper surface even, the leaves, blossoms and fruit covering it to within about two feet of the ground. If well cared for it will turn stock in about four years.

I have grown it fifteen years in grass and cultivated ground, and have not known a sprout to come from the roots, but always from the collar of the plant, and hence, say it never sprouts or spreads, but thickens by the youngest wood. It is very hardy; the cold winters have not injured it, nor has any of the oldest wood died out.

The bark of the whole, root and branch, is bitter, so that mice, nor nothing else will eat it. The plant has thorns. The blossoms are yellow, the fruit red and sour—used for tarts and jellies, and is substituted for cranberries.—*Rural American*.

Last fall we sowed several quarts of the above seed, to grow plants for our own use, as we know that it will make one of the very best of hedges for orchards and gardens, as nothing, not even a bird, can get through one eight or ten years old. It is hardy and easily grown. Of course this hedge must be on dry land or that can be underdrained. We have before called the attention of our readers to the notice of this plant for hedging.—*Ed.*

✂ We think, with some of our English brethren, that rotten straw is not manure; coarse rubbish, when applied as a top dressing to meadows, will increase the yield of hay twenty-five per cent. It may be carried on any time in the winter, when it can be handled on account of frost. Care should be taken not to drive in the meadow when your wagon wheels will cut through the sod, because these ruts will remain through the season.

TREATISE ON SUGAR AND SIRUP FROM SORGHUM, by John L. Gill & Son, Columbus, Ohio. A pamphlet of twenty pages, in which the subject is ably handled.

Miscellaneous.

An Editor Taking Lessons.

It is our aim to devote the mid-summer season of every alternate year, to a tour of observation through the western or mid-western division of the great *Agriculturist* Parish, which extends from the Atlantic to the Pacific. This year we went on our fifth western trip, out through New Jersey, Pennsylvania, Central Ohio, and Indiana, into Illinois and Iowa, and returned through Michigan, Northern Ohio, and New York, making occasional stops, going and returning. (In these trips we generally ride only in the day time, and usually arrange to secure a position in the center of the baggage cars of the railway trains, because the wide doors give an unobstructed view of the country on either side, and we there have the company of local employees of the roads, who are able to point out objects of interest, and to give much general information. In this way we see much of the face of the country, the style of culture, the condition of the crops, etc. Indeed, were we not to stop at all, but travel thus for 3000 to 5000 miles, we should consider the time well spent).—Our main object, this year, was to study prairie farming, especially in Illinois and Iowa, which are *par excellence* the prairie States. We stopped at some twenty to twenty-five localities, and from observation, and conversation with practical men, gathered a large amount of information. It would be impossible to give a minute journal of what we saw, heard, and learned—as some may expect—a large volume would be needed, sundry items will appear in this and other numbers, and we hope our western readers will find us still better prepared to supply a journal specially adapted to their wants, so far as there is any specific difference in the modes of cultivation East and West. —*American Agriculturist*.

The above is rather a new mode of studying the agriculture of a country and may be considered as the study of prairie farming made easy. We have traveled several thousand miles in the same position and gazed with admiration of the country as we rapidly whirled through it, and in addition have rode a thousand or two miles on the engine, looking at the country from the tops of the tender and holding converse with the stoker between the repeated feedings of the rapacious monster, whose maw was a young *Ætna*, all the time wondering if the engineer did not know more of the lay of the land than any of them, and if he would only open his mouth he might say a great deal but no, nothing could be got out of him, though by his continual looking at the country there could be no doubt that he was in a deep study and revolving in his mind, how he would stir up the soil if he could once get off the rails. Hereafter we shall the more highly prize the *American Agriculturist*, published by Orange Judd, No. 41, Park Row, N. York, at one dollar a year. For have we not taken lessons in

prairie farming with the same teachers, gazed over the same corn-fields, and drank in the same inspiration from the soft zephyrs that flow in through the baggage car. How much practical agricultural knowledge we have thus unconsciously taken in, we leave to our readers to be the judges. We did not know before what blessings came to us thus all unasked, and during all of those rides after knowledge were just green enough to suppose it necessary to stop at the station and visit the farmers to learn how crops were made or lost, we now see how much time has been thus thrown away. Next year we think some of writing a book on the agriculture of N. York, and if the N. York Central will give us a pass and the middle of the baggage car we shall be able to do the subject full justice. Friend Judd, when you make your next biennial visit to the parish do try the tender, you will drive a subsoil deep into prairie farming.

Ed.

From the Rural New Yorker.

Sheep and Cows.

FIEND MOORE—Seeing a communication in your paper of April 4th, in regard to the respective profit of sheep and cows, in which our friend, T. C. P. makes the profit of cows double that of sheep—and in this week's number another from D. F. B., in which the respective profits are nearly equal—now, as I have had some experience in these matters, I beg leave to say a few words on the subject.

In the first place I think our friends have made their estimates on sheep too low; not on the profit of a sheep, but on the number that can be kept on the feed required to keep a cow. I shall assume that one cow is equal to ten sheep in capital invested, (in common times, I mean,) and expense of keeping; and, as my friend says, "now for the figures." Allowing five pounds of wool per head, and 40 cents per pound, (which is about the average price, and one lamb for two sheep, that are worth \$1 50 per head, we have the product of 10 sheep 5 lambs, \$27 50. We will take his figures on the cow, for by my own experience I find them nearly correct—550 gallons of milk. Allowing 3 gallons to make a pound of butter, we have 183 pounds, which, at 12½ cents per pound, (which is as much as we can make it average in Ohio,) we have \$22 90; deduct \$5 for trouble, and we have \$17 00. Difference in favor of sheep, \$9 60. If made into cheese one gallon of milk will make a pound of curd; 3 pounds of curd will make 2 pounds of curd cheese—which gives us 366 pounds at 8 cents per pound, amounting to \$27 28. Deduct \$5 for trouble and we have \$22 28 profit. Difference in favor of sheep, \$5 22; and then, too, the difference between the cheese and butter, and the wool market. The latter is always a cash article, and but little trouble to get to market, while the former obliges a man to always be a peddling; and beside the dealing with irresponsible men there is a vexation of spirit about it I never could endure. Perhaps some of our friends who have the advantage of a good market for milk, at a good price,

can realize more than this from their cows. Difference in situation makes a vast difference in this matter.

I have given you an estimate based upon actual experience of what can be done in common times, where I live, with sheep and cows. But if we take them as they are now, when, instead of 40 cents we are likely to get nearer 80 cents per pound for wool, and a lamb is worth from \$2 to \$3 as soon as it can stand, my friend, T. C. P., will find the profit on the other side of the house; besides, a man can keep any amount of sheep without doing what a cheese maker is always obliged to do—that is, break the fourth Commandment. c. o.

From the New England Farmer.

Materials of Which Soil is Composed.

CLASSIFICATION OF SOILS.

Soils are named from the amount or proportions of the various substances which enter into their formation.

If a soil consists of sand, it is called a sandy soil.

If the largest portion is clay, it is called a clayey soil.

When lime predominates, it is called a calcareous soil.

Those substances may exist together, but in different proportions, in the same soil, in which case it usually receives a distinct name.

A mixture of sand and clay, with a small proportion of lime, is called a loam.

If it contain much lime, it is called a calcareous loam.

If it is composed of clay with much lime, it is called a calcareous clay.

A certain proportion of these substances has given specific names to soils.

Pure clay, which is commonly called pipe clay, is composed of about sixty parts silica, and forty parts of alumina, with a small quantity of oxide of iron. This kind of clay contains no silicious sand which can be separated by washing with water. It forms but a small quantity of soil, and is found in comparatively few localities.

The clay forms the strongest of clay soils. It consists of pure clay, mixed with from five to fifteen per cent. of silicious sand, which can be separated from it by boiling or washing.

Clay loam contains from fifteen to thirty per cent. of fine sand, which can be separated by boiling. The different parts of the soil may be very easily separated, and it is consequently more easily worked. Such soil is very properly sought for in the selection of a farm.

A loamy soil contains from thirty to sixty per cent. of sand, which is retained so loosely that it can be readily separated from it by washing.

A sandy loam leaves from sixty to ninety per cent. of sand.

A sandy soil consists mostly of sand, and contains no more than ten per cent. of clay.

In a marly soil the proportion of lime must be more than five per cent. but less than twenty per cent.

Marls are called sandy, loamy and clayey, in accordance with the proportions they may contain of these substances, provided they be free from

lime, or do not contain more than five per cent. of this material.

Soils are denominated calcareous when the proportion of lime exceeds twenty per cent., and thus by its quantity becomes an important constituent.

There are also calcareous clays, calcareous loams and calcareous sands, which take their names from the proportion of clay and sand which they may contain.

Vegetable mold is sometimes a prominent characteristic of a soil.

In peaty soils its proportion may be equal to sixty and sometimes as much as seventy-five per cent of organic matter.

THE HONEY BEE IN CALIFORNIA.—We have heard a very singular, yet very plausible reason why bees have not done well lately, or why they do not lay up their usual store of honey for winter. It certainly will be remembered that on the first introduction of bees into California, it was with great eclat and a furor was raised—everybody was on the “bee mania,” same as every other mania, or speculation. At first bees did remarkably; even most wonderfully overflowing the hives with honey until it “cropped out” like our “quartz leads,” and often paid better. The increase of swarms was without precedent, giving four, six, or eight, and sometimes ten swarms in a season—the product from one hive. This was a result never known in any other country. This continued for some three years—the increase being less and less and their products being also less until the past year, from all quarters of our State, the report is the bees have not done well, neither made much honey and have not increased swarms. The change has been most singular. The cause is undoubtedly the want of *feed* and the want of care and attention—for the bee speculation, like everything else when it “don’t pay,” the thing is neglected and given up, and so the hives lay round loose, a poor neglected “by-gone.”

The reasoning and philosophy of our friend was this wise: when the bees first came, being pleased and delighted with the genial clime and the abundance of flowers, went to work in good earnest, the same as the early miners did, to lay up their winters store, to “*get their pile*,” but after a little, when they found *there was no winter* and that they could *play roused all the year*, they could not see the use for working so hard all the time. They found they could get their food any time of the year, and as there were so many gardens in full bloom all winter, they concluded these gardens, like the “*free lunches*,” would supply them, so they concluded they would adopt the “*loafing system*,” and now the beautiful busy bee—that little emblem of industry—of which every child has been taught to sing, “How doth the little busy bee”—this useful tiny insect—has actually been *spoiled* by coming to California and acquiring the habit of “bumming around,” living only from day to day without a thought of coming winters. What a *reminiscense* this is for the Bee speculators of past years.—*Cal. Farmer*

HOGS AND THEIR CULTURE.—This is a pauphiet of sixteen pages, by Reuben Hurd, of Springhill, Whiteside Co., Illinois, a most excellent, common sense view of breeding, growing and fattening hogs.

Poetry.

From the Atlantic Monthly for January,

The Planting of the Apple Tree.

BY WILLIAM CULLEN BRYANT.

Come, let us plant the apple tree !
Cleave the tough greensward with the spade ;
Wide let its hollow bed be made ;
There gently lay the roots, and there
Sift the dark mould with kindly care,
And press it o'er them tenderly,
As, round the sleeping infant's feet,
We softly fold the cradle-sheet ;
So plant we the apple-tree.

What plant we in the apple-tree ?
Buds, which the breath of summer days
Shall lengthen into leafy sprays ;
Boughs, where the thrush with crimson breast,
Shall haunt, and sing, and hide her nest.
We plant upon the sunny lea
A shadow for the noontide hour,
A shelter from the summer shower,
When we plant the apple-tree.

What plant we in the apple-tree ?
Sweets for a hundred flowery springs,
To lead the May-wind's restless wings,
When, from the orchard-row, he pours
Its fragrance through our open doors ;
A world of blossoms for the bee ;
Flowers for the sick girl's silent room ;
For the glad infant sprigs of bloom.
We plant with the apple-tree.

What plant we in the apple-tree ?
Fruits that shall swell in sunny June,
And redden in the August noon,
And drop, as gentle airs come by
That fan the blue September sky ;
While children, wild with noisy glee,
Shall scent their fragrance as they pass,
And search for them the tufted grass
At the foot of the apple-tree.

And when above this apple tree
The winter stars are quivering bright,
And winds go howling through the night,
Girls, whose young eyes o'erflow with mirth,
Shall peel its fruit by cottage hearth,
And guests in prouder homes shall see,
Heaped with the orange and the grape,
As fair as they in tint and shape,
That fruit of the apple-tree.

The fruitage of this apple-tree
Winds and our flag of stripe and star
Shall bear to coasts that lie afar,
Where men shall wonder at the view,
And ask in what fair groves they grew ;
And they who roam beyond the sea
Shall look and think of childhood's day,
And long hours passed in summer play
In the shade of the apple-tree.

Each year shall give this apple-tree
A broader flush of roseate bloom,
A deeper maze of verdurous gloom,
And loosen when the frost-clouds lower,
The crisp-brown leaves in thicker shower ;

The years shall come and pass, but we
Shall bear no longer, where we lie,
The summer's songs, the autumn's sigh,
In the boughs of the apple-tree.

And time shall waste this apple-tree,
Oh, when its aged branches throw
Thin shadows on the sward below
Shall fraud and force and iron will
Oppress the weak and helpless still ?
What shall the task of mercy be,
Amid the strifes, the toils, the tears,
Of those who live when length of years
Is wasting this apple-tree ?

"Who planted this old apple-tree ?"
The children of that distant day
Thus to some aged man shall say ;
And, gazing on its mossy stem,
The gray-haired man shall answer them :
"A poet of the land was he,
Born in the rude but good old times ;
'Tis said he made some quaint oid rhymes,
On planting the apple-tree."

Editor's Table.

BAKER & PHILLIPS - - - PUBLISHERS.

M. L. DUNLAP, Editor.

SPRINGFIELD, ILLINOIS, JANUARY, 1864.

THE year eighteen hundred and sixty-three has quietly gone to its grave, but its memory will long remain. If it has shown great virtues and high patriotism, it has also shown deep vices and treacherous disloyalty. If the Western farmer has been made happy in high prices for the products of his acres, he has had to pay higher ones for his needs and luxuries while his crops have been less than usual. It is little satisfaction to him if corn is worth a dollar a bushel, if he has none to sell, and still less interesting if he has to buy. The drouth and the early frost combined have shorn the farmer of a large share of the years labor, and should this be followed with what we now predict, a long, cold, snowy winter, the cup of the stock feeders and of the wool growers will be filled with an unpleasant reminder, that the weather is not in their keeping. Let them be admonished that shelter is to some extent food, and that pine boards and wind breaks of rails and refuse straw will assist to eke out a short supply of fodder. "Shelter your stock" should be written on every corner of the farm, on every post, and at night when he sleeps with his cattle exposed to the pelting storm, or stand shivering behind some dilapidated fence, he should dream of the wizzard's of the storm riding him through the night air amid the biting cold.

CUT AND HOUSE YOUR FIREWOOD.—An abundant

supply of wood should be hauled up, cut ready for use and put under cover. Going after wood in harvest or late in autumn when the roads are muddy is very bad economy.

CORN CRIBS.—These should be made during the winter; none but a rich man can afford to put his corn in a rail pen and leave it exposed to the storm, but a rich man has generally too much good sense to do so, and often the farmer who can ill afford it is the one to make a victim of himself. Let us have a change of base in this respect throughout the central part of the State, where this abuse stands out the most glaring. If it has taken six full crops to make it so plenty that the price went a hundred per cent. below the cost of production, it has taken but one failure to put it four hundred per cent. above. These are significant facts that strongly urge the value of good, well covered cribs.

REPORT OF THE COMMISSIONER OF AGRICULTURE.—

We are under obligation to James Grinnell, Esq., Chief Clerk, for extra copies of the Report for 1862. The more we examine this work, the better we like it, as it contains much valuable information, not found in other works.

The Report for 1863 is also at hand, or rather the introduction to it, as the accompanying papers have not been printed. This part of the report contains thirteen pages, from which we clip the following:

“Although the year just closed has been a year of war, on the part of the Republic, over a wider field and on a grander scale than any recorded in history, yet, strange as it may appear, the great interests of agriculture have not materially suffered in the loyal States. With the exception of some fruitless incursions along the border, and the invasion of Pennsylvania and the defeat of the insurgents on the now historic field of Gettysburg, the loyal people have everywhere enjoyed a “broad and quiet land,” with abundant health and prosperity, while a wider territory has been cultivated and a larger yield realized, except where drought and frost interfered, than during any previous year. Notwithstanding there have been over one million of men employed in the army and navy, withdrawn chiefly from the producing classes, and liberally fed, clothed and paid by the government, yet the yield of the great staples of agriculture for 1863, as compared with the previous year, has been as follows, viz:

	1862.	1863.
Wheat, in bushels.....	169,993,500	191,068,239
Oats, in bushels.....	172,520,997	174,858,167
Corn, in bushels.....	586,704,474	449,163,894
Hay in pounds.....	20,000,000	18,500,009
Tobacco, in pounds.....	208,207,071	258,462,413
Wool, in pounds.....	63,524,172	79,405,215

The comparison, with the exception of corn and

hay, injured by drought and frost, is even more favorable for 1863, if instituted in regard to the general products of the farm.

This wonderful fact of history—a young republic carrying on a gigantic war on its own territory and coasts, and at the same time not only feeding itself and foreign nations, but furnishing vast quantities of raw materials for commerce and manufactures, proves that we are essentially an agricultural people that three years of war have not, as yet, seriously disturbed, but rather increased industrial pursuits, and that the withdrawal of agricultural labor, and the loss of life by disease and battle have been more than compensated by machinery and maturing youth at home, and by the increased influx of immigration from abroad. In spite of the vast influence of free institutions in Europe, brought to bear on the masses of her people against our Republic; notwithstanding the flame of civil war still rages within our borders, yet the tide of immigration was never stronger, healthier or more promising. While some, as adventurers, seek this western world for military fame, stimulated by our large bounties and the chances of promotion, or to fight sincerely the battles of freedom and equality, the greater part come to labor, to enjoy independence and quiet, and to make happy though humble, homes for themselves and their children.

According to the report of the New York commissioners of immigration, the number of immigrants arriving at that port during the eleven months ending November 30, of the year 1863, was 145,519, against 76,306 during 1862. This proportional increase holds good in respect to the other great ports of our country, Independent of the large number of persons from Canada and other portions of America.

A GREAT FACT.

Whatever, owing to the war and the march of events, may be the future condition of land and labor in the rebellious States, or the legal decisions of the courts arising out of confiscation, litigation, or the demands of the military service, yet a change must gradually take place, not only in the tenure of the soil and its modes of culture, but in the people themselves and their institutions. Much of the land will gradually pass out of the hands of its present proprietors, either by purchase, the decisions of the courts, or by the force of circumstances. Estates will be divided into smaller farms and occupied by the humbler classes in the south, whites and freed men, and by industrious and enterprising settlers from the other States and from Europe. The old fallacy, so long inculcated by politicians and accepted by the people, like many other fallacies respecting the south, that none but negroes can toil there, will be thoroughly exploded during the present generation. Once divide there the vast estates, and elevate labor to its true dignity by hiring, instead of owning it, and I venture the prediction that in less than ten years after the close of the war, a million of the industrial classes, native and foreign, will have settled in the sunny south, making it teem with new beauty, progress and wealth. The tides of immigration which now flow across the sea, and sweep with such irresistible power, bearing and leaving in their course the rich deposits of industry and art, of prosperity and

life, will then divide at the Alleghenies and equally enrich the hills, the valleys and savannas of the south.

The great laws governing the flow of population are as palpable as those governing the physical world; and these laws should be studied and heeded by our legislators if they desire to populate and develop, equally, every part of our country. Men who have been oppressed in the Old World, and have yet manhood enough left to seek a free life in the New, will not settle in the mild latitudes of the south, where labor is legally degraded, but go, though it be to the forests and winter snows of the northwest, where labor is honorable in all.

Now, in respect to the south, with its magnificent zones of climate and naturally fertile soil, there is no question but that her agricultural products and general prosperity will be vastly increased by the new condition of things imposed upon her by the rebellion. Terrible as is the ordeal, time, moderation, freedom and industry will be the great healers and rectifiers; so that it shall be seen that even war offers its compensations as well as peace. Plantations that now contain from three to five thousand acres of land will be divided into farms of from three to five hundred acres, which can be more easily and better tilled, and made far more productive. While the south will continue to grow the great staples, such as cotton, sugar and rice, many other semi-tropical productions may be introduced, of equal value, and more easily cultivated, together with all the cereals, grasses, fruits and vegetables of the temperate zone.

HOW STATISTICS ARE OBTAINED.

About two thousand circulars, with questions plainly put, and requiring but simple answers, have been sent monthly to correspondents in every State and almost every settled county, the replies to which, requiring much labor in their compilation and arrangement, have been, with reports on the weather from observers of the Smithsonian Institution, and with other timely suggestions from the department, published monthly, ten to fifteen thousand in number, and spread over every portion of the country.

The success attending the first attempt of our government to collect the agricultural statistics of the country is attested by the newspaper press all over the land, commercial and political, as well as agricultural; and is an indication of what might be done in a well arranged plan, provided for by Congress, and carried out by governmental aid. There have been issued in all about 20,000 circulars of inquiry; and sent out 70,000 monthly reports.

WHO GET THE SEEDS.

The whole number of packages of seeds, cereals, &c., distributed, is about 1,200,000. Of these over half a million were sent or given directly to those applying for them. About 300,000 to agricultural societies. About 40,000 were quart packages of wheat and other cereal grains; about 950,000 garden and flower seeds; about 120,000 tobacco seed, and the remainder cotton, flax, &c.

The anxiety of the people of the country to obtain the seeds, and the satisfaction manifested at their reception, and the resulting productions, are a sufficient attestation that the distribution of valuable seeds by the department is a recognized cus-

tom and duty which may not be abandoned, the complaints of captious or interested parties to the contrary notwithstanding. And I hazard nothing in saying, that in no department of this government does the expenditure of a like sum confer upon so large a proportion of the people anything like the same amount of pleasure and substantial enjoyment.

ABOUT THE GARDEN.

The propagating and experimental garden, a most important branch of this department, in former years suffered much through incompetency and neglect. In order to remedy these evils, and, in so far as it may be possible, to make up for lost time, I have taken great pains to secure the services of a gentleman eminently well known in the department of science needed, to carry on successfully, the experiments to be made.

During the year there have been distributed from the gardens of the department about 25,750 articles comprising vines, bulbs, cuttings and plants. About one-half of these were distributed through members of Congress; the remainder has been sent for dissemination by agricultural and other rural associations.

JUST THE THING.—The limited facilities of the present garden greatly retard the full development of this object. It is highly necessary to establish specimen orchards of the best fruits, in order to illustrate the best modes of culture, and arrive at a correct knowledge of the nomenclature of varieties of fruits. This want is now severely felt, and its fulfillment would be hailed with genuine delight by all who are fully alive to the growing importance of fruit culture.

We want an experimental farm in each State of the Union. Not a pattern farm, by any means, but one on which the various trees, plants and farm products, both new and old, can be tested and compared, and where also the various modes of culture could be tried side by side. We hope the grant of lands will do something to teach agriculture; but in this we want experience.—Ed.

AT ALTON.—When at Alton attending the State Horticultural Society winter meeting, the committee on reception assigned us to the care of H. C. Sweetser, Esq., whose hospitality we enjoyed during the session, and who will please accept our thanks. On such occasions we generally report for the ———, which pretty fully occupies our time and have made it a rule to occupy a room at some hotel, but in this case we had all the benefits of a hotel and excellent society, not only in the host but in several visitors who were taken in in the same manner. We can say that Alton is a good place to hold such meetings. The people are more or less interested in horticulture and fruit growing and have taken a deep interest in these winter meetings. They have done themselves great cred-

t on this occasion. We intend to visit them in their gardens and orchards next summer.

TO CLUBS.—The getters up of clubs will remember that they are entitled to an extra copy in clubs of twenty at ten dollars. Send along the ten dollar clubs and you will double the value of your money.

HOG TAMER.—We acknowledge the receipt of this valuable instrument, from Reuben Hurd, of Springhill, Whitesides county, Ill. We had used one of them last spring with great satisfaction, a notice of which can be found on page 267, for 1863. The one received is an improvement by having three sizes of cutters, adapting them to adolescent and aged rooters. They are invaluable to hog growers. See advertisement.

THE HORTICULTURIST.—This standard work is now in its nineteenth year—almost of age. Our library contains the full set, and a goodly array they make. They contain the best history of rural improvements now extant, forming an Encyclopedia of the art of gardening in plain cloth, embellished with vegetables, and highly embossed with the ornamental. Send \$2 to Mead & Woodward, New York city, all you who would like to make progress in grape culture, gardening and the ornamentation of your grounds; or, if it will please you better, club it with the ILLINOIS FARMER at \$2 50.

SCIENTIFIC AMERICAN.—This is the only paper of its class that we are acquainted with, and it should be in the hands of all farmers who have large families of boys, for some one of them cannot be otherwise than benefited by it, as it may be the means of arousing dormant genius that would otherwise remain undeveloped. The farmer should take it to aid him in his business, for in it he will find drawings and descriptions of most new machines and implements for the farm.

"Mechanics will find in the Scientific American valuable information concerning their various trades, and details of all the latest and the best improvements in machinery, tools and processes; together with such useful knowledge as will tend to dignify their occupations and lighten their labors.

Inventors will find in the Scientific American all necessary instructions how to secure letters patent for their inventions; also excellent illustrations and descriptions of all the principal inventions recently made in this country and in Europe; likewise an official list of the claims of all patents granted weekly at Washington, with numerous explanatory notes; also discussions of questions concerning the patent laws of the United States, re-

ports of trials in court, with legal opinions, etc.

Manufacturers will find in the Scientific American illustrated articles descriptive of the most recently invented machines used in various manufacturing operations; the different processes being lucidly described; also practical recipes of much value to manufacturers, with hints upon the economical management of factories.

Engineers will find in the Scientific American valuable descriptions of all the best inventions connected with steam, railroad, marine and mechanical engineering; together with a faithful record of the progress of science in all these departments, both at home and abroad.

Chemists will find in the Scientific American details of recent discoveries made in chemistry, and articles on the application of that science to all the useful arts.

Agriculturists will find in the Scientific American engravings and descriptions of all the best and most approved farm implements; also original or well selected articles on matters relating to general agriculture; great care being taken to furnish farmers, regularly, with such information as will be valuable in the field, as well as in the household.

All classes of readers will find in the Scientific American a popular *resume* of all the best scientific information of the day; and it is the aim of the publishers to present it always in an attractive form, avoiding as much as possible abstruse terms. To every intelligent mind, this journal affords a constant supply of instructive reading.

Subscribers should remit so as to have their subscriptions begin on the 1st of January, with the new volume. Those who preserve their numbers for binding have, at the end of the year, two handsome volumes of 416 pages each—832—with several hundred engravings.

Terms of subscription—\$3 for one year; \$1 50 for six months; \$1 for four months; 20 copies in a club can be had for \$40. Specimen copies sent free; also, gratis, a pamphlet of "Advice to Inventors." Address Munn & Co., Publishers, 37 Park Row, New York city."

D. Warder's Fruit Book.

Col. Harris, writing of an interview with Dr. W. says:

"The worthy pomological Doctor is still gathering materials for his book; but as the progress of knowledge has rendered his earlier notes obsolete, and the undertaking stares him in the face if he should undertake to revise them, he has prudently concluded to issue a yearly abstract of the progress of pomology, which shall at once be available as well as feasible. The bulk of his notes may be issued in a manual which will comprise a practical treatise on the general subject."

—What we want and what the West must have is just such a manual as the Doctor can get up and for which he has the material. We have certain varieties of fruit that do well in most parts of the West, and of these we want the full history, leaving the unsuccessful and untried fruits to a more fitting opportunity.

To give our views a little more in point. Take,

for instance, the Yellow Bellflower apple, give its pomological description with out lines, the form and peculiar growth of the tree; the soils best adapted to it, and the location where it is cultivated; in fact to completely exhaust the subject. We care not if this one fruit occupies a dozen pages, no matter, we want all that can be said in its favor and against it, where it will flourish and where it will not. Let the book be filled with our leading fruits, until a dollar volume is reached, when send it out into the world, and the next year another, each year experience will furnish material for a book of fruits that will go to make up a history of fruits that will have a permanent value. Downing as a catalogue cannot be dispensed with. Barry and Thomas on culture are valuable, and what we now want is the history and value of individual fruits.

The Illinois State Horticultural Society meet at Alton this month, and we trust this subject in hand and encourage its prompt execution.

CATALOGUES RECEIVED.—Parsons & Flushing, N. Y. Wholesale standard and small fruits. Also list of exotic plants.

Andrew S. Fuller, Brooklyn, N. Y. Strawberry Catalogue. Also one for small fruits and ornamental trees and plants.

Rev. J. Knox, Pittsburg, Pa., strawberries and grapes.

J. C. Maxwell & Bro, Geneva, N. Y., general nursery stock, wholesale and retail.

David J. Griscom, Woodbury, N. J., evergreen and ornamental trees.

F. K. Phoenix, Bloomington, Ill., general nursery Stock, probably the largest in the State.

E. Moody and Son, Lockport, N. Y., general stock, largely of pears.

Hooker, Farley & Co., standard fruits and grape vines at wholesale.

John C. Teas, Raysville, Ind., general nursery stock.

Babcock & Bro., Summerfield, Ill., general nursery stock.

H. E. Hooker & Co., Rochester, general nursery stock.

Henry A. Dreer, Philadelphia, Pa., select list of bulbous flower roots.

James Vick, Rochester, N. Y., flower and vegetable seeds.

Frost & Co., Rochester, N. Y., general nursery stock.

A. G. Handford & Bro., Columbus, Ohio, general nursery stock.

Norman J. Colman, St. Louis, Mo., general nursery stock.

Joseph N. Wertford, Cambridge City, Ind., general nursery stock,

Starr & Case, Indianapolis, Ind., farm implements and wagons.

J. M. Bailey, Plattsburg, N. Y., Adirondick grape.

Cowles, Roberts & Co., Syracuse, N. Y., nursery stock.

CARBON COAL MINES }
December 27, 1863. }

M. L. Dunlap, Esq.:

Dear Sir—Your very kind note in relation to the Christmas-tree, was received yesterday, and I beg to offer my sincere thanks for the pleasure you have enabled me to give to more than a hundred children. The tree arrived in fine order, and is not only a most beautiful specimen of its kind, but admirably suited to the purpose. I never saw one more so. It did duty twice—on Christmas Eve, for forty Belgian children, not one of whom can speak a word of English, and again the next evening, for between 60 and 70 of the mixed kind—Welsh, German, Irish and American—who make up my other Sunday School. On such occasions every one is sure to turn out, even to the smallest toddler. The tree was brilliantly lighted with candles cut small for the purpose, and in addition to these was hung, on the first evening, only with packages of bonbons, whose white paper and gay ribbons formed a lovely contrast with the dark foliage of the tree, and with apples that looked as natural as if they had grown there. The next evening the decorations were more elaborate, consisting, besides the candy, of books, pin-cushions, dolls, toys, &c., and it would have done your heart good on both occasions, to have seen the delight of the little creatures, not one of whom had ever witnessed such a sight before. They walked round and round the tree in rapt admiration, and when they had feasted their eyes on its beauties and it had been stripped of its gifts, we adjourned to the parlor, sang our Sabbath School hymns, and had some refreshments. On the whole, it was a most perfect success. I had enquired about here in every direction without hearing of a single evergreen. I have had the tree planted in our yard, hoping that it may live to be both a beautiful ornament, and a lasting memorial of the occasion. Its having weathered such storms already encourages me to hope that it will not resent the "change of base," and the being compelled to bear such unaccustomed fruit for a short time.

Wishing you and yours all a Happy New Year, I remain very truly yours,

Miss E. S. K.

Such care for the children of those who delve in the dark mine, will have its reward, not only in the hearts of those who ministered to it, but in the making of better men and women. It is seldom that the children of the laborer have so rich a treat on the day that their fathers have so long and so joyfully celebrated, as the one above mentioned. We receive our coal from this mine, and when we fill the grate shall often cast a thought after the children of the sturdy miners whose Christmas was so joyfully kept.

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Special Notices.

AGENTS.—We do not appoint any agents—all are voluntary. Any person so disposed, can act as agent in any place.

ENLARGE YOUR CLUB.—Will not the friends of the ILLINOIS FARMER inquire how many copies of the FARMER are taken in their respective offices, and pass around among those who ought to have their names added to the list? Our terms are so low to clubs of ten and twenty that we ought to have one or the other made up at every office in the State, and at every office in Central Illinois, one of twenty or more. Will our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?


HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighborhood, can easily make up a club of five, ten or twenty, but no time should be lost in doing so, for your neighbors may send east for their


paper which, though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us Western farming.


HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage:


1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it.
2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them.
3. Get post masters interested. They see everybody, and are efficient workers.
4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers.
5. Begin now, before the agents of Eastern papers get up their clubs.

This last hint is especially important. Let us hear from you soon. See terms elsewhere.

 Clubs may be composed of persons in all parts of the United States. It will be the same to the publishers if they send papers to one or a hundred post offices. Additions made at any time at club rates. We mail by printed slips, which are so cheaply placed on the papers, that it matters little whether they go to one or a dozen offices.

 Correspondents will please be particular to give the name of the post office, county and State.

 Specimen numbers will be sent gratis, upon application.

 Address

BAKER & PHILLIPS,
Springfield, Illinois.

SPECIAL NOTICE.—For terms see prospectus on last page. All exchanges and communications for the eye of the editor should be directed to ILLINOIS FARMER, Champaign, Illinois. Electrotypes and business matters, and subscriptions, to the publishers, Springfield, Illinois. Implements and models for examination should be sent to the editor. The editor will, so far as it can be done personally, test and examine all new machines and improvements submitted to his inspection. He will be found at home, on his farm, nearly all of the time. So far as it is possible, the conductors on the Illinois Central Railroad will let off passengers at his place, which is directly on the road, three and a half miles south of the Urbana Station, now the city of Champaign.

Advertisements.

GROVER & BAKER'S SEWING MACHINES
were awarded the highest premiums at the following State Fairs of 1863, for the Best Family Sewing Machine, the Best Manufacturing Machine, and the Best Machine Work:

NEW YORK STATE FAIR.

First Premium for Family Machine.
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First Premium for Manufacturing Machine.
First Premium for Machine Work.

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First Premium for Family Machine.
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First Premium for Machine Work.

INDIANA STATE FAIR.

First Premium for Machine for All Purposes.
First Premium for Machine Work.

ILLINOIS STATE FAIR.

First Premium for Machine for All Purposes.
First Premium for Machine Work.

KENTUCKY STATE FAIR.

First Premium for Machine for All Purposes.
First Premium for Machine Work.

PENNSYLVANIA STATE FAIR.

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First Premium for Machine Work.

The above comprises all the Fairs at which the **GROVER & BAKER MACHINES** were exhibited this year. At nearly all of them the leading Sewing Machines were in competition.

The **GROVER & BAKER S. M. Co.** are the only parties who manufacture and sell Machines which both **SEW PERFECTLY** and **EMBROIDER PERFECTLY**.

GROVER & BAKER S. M. COMPANY,

115 Lake Street, Chicago.

jan18-64-ly

Fruit Farm in "Lower Egypt" for Sale.

Forty Acres $4\frac{1}{2}$ miles from Anna, (Jonesboro Station, I. C. R. R.) Log House, Cistern, Stable, &c. 20 acres improved. 600 young fruit trees, a few of them in bearing, including Apple, Peach, Pear, Quince, Cherry, Plum, Mulberry, all the choicest sorts, selected by a good pomologist.

Also half an acre Wilson's Strawberry, a good supply of Grape, Gooseberry, Raspberry, Blackberry, &c.

The place is adapted to growing early Apples, Quinces, Pears, Small Fruits, Sweet Potatoes, for Chicago market. Is well watered by a creek, and would suit well for keeping a few cows and making butter. A Horse, 2 Cows, Poultry, Implements, &c., will be sold with the place if desired. Good road to Depot, and but one mile to School House. Price \$700 in Greenbacks, payable when deed is delivered.

If you really wish to purchase, address Box 57, Anna, Union County Ill.
jan1-1t*

ROSS, THOMPSON & CO.

(Successors to G. S. Thompson.)

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Champaign.

March 1, 1863.tf

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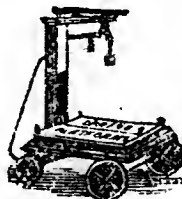
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Springfield, Ill. Major J. G. Fonda, 12th Ill. Caval-
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August, 1862.tf



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The Illinois Farmer,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE.

PUBLISHED AT

SPRINGFIELD, - - ILLINOIS,

BY

BAKER & PHILLIPS,

AND IS EDITED BY

M. L. DUNLAP, Tribune's Rural.

TERMS IN ADVANCE.—\$1 a year; two copies 1 50; five copies \$3; ten copies \$6, and one to getter up of the club twenty copies \$10.

It is not necessary that the club should all be at one office—we send wherever the members of the club may reside. The postage on the FARMER is only three cents a year in the State of Illinois, and six cents out of it. Specimens numbers sent free on application. Subscription money may be sent at the risk of the publisher.

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All business letters are to be directed to the publishers, Springfield.

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All worthy objects advertised, and those of importance to the Farmer will receive, from time to time, such editorial notices as the Editor may consider them worthy of, without additional charge.				
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GENERAL AGRICULTURE,
STOCK RAISING,
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And DOMESTIC ECONOMY generally.

The Publishers' aim will be to give such information and assistance as will enable the farmer to grow the largest crops with the least expense, and what is equally important to assist him in securing the

LARGEST PRICES

the market affords, by giving such reliable information that is obtainable concerning the markets at home and abroad—the cost of forwarding produce to market, and other attendant expenses—thus enabling the producer to take advantage of the conditions of the market in dispensing of his produce.

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The paper consists of 16 pages large quarto, making a convenient size for binding and reference. A full index is given at the end of each six months.

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A portion will also be devoted to Advertisements of such character as is appropriate to an Agricultural paper.

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This celebrated Veterinary Surgeon will contribute regularly to the FARMER, giving especial attention to the answering of questions and giving information upon matters interesting to stock growers.

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THE ILLINOIS FARMER.

VOL. IX.

SPRINGFIELD, ILL., FEB., 1864.

NO. 2.

The Illinois Farmer,

DEVOTED TO THE

FARM, THE ORCHARD AND THE GARDEN,


PUBLISHED BY

BAKER & PHILLIPS,

SPRINGFIELD, - - - - - ILLINOIS.

M. L. DUNLAP, Editor.

All business letters should be addressed to the publishers.

 EXCHANGES and all matters pertaining to the editorial department, must be directed to ILLINOIS FARMER, Champaign, Ill., as the editor resides at that point, and is seldom at the office of publication, from which he is distant over eighty miles.

* * For terms see prospectus and special notices in advertising department.

February.

The new year is slowly marching on. The great store house of Arctic cold was opened upon her, at her incoming, but this is now yielding to more genial days.

The great wave of cold, if of short duration, was crushing, and left the traces of death in its pathway. The stalwart man fell before it, when exposed to its deadly touch; the maiden, though wrapped in thick robes of the shaggy buffalo, could not indure its visitation, when the driving storm blinded the team that wandered on the trackless prairie; the sturdy school boy of seventeen, with his younger brothers could not stem its fierce onset, that came

drifting from the direction of their home. One just budding into beauty sets against a shock of corn stiff and stark, while in yonder drift folded in the robe of winter, lies the little boy with his school basket under him with his shawl over his head.

Such scenes marked the track of the storm, as it rolled its wave of snow and cold; cold, deep freezing, deathly cold, down the long stretches of prairie.— Dead horses, cattle, sheep and swine, piled in fearful winrows, to be counted by thousands but added to the desolation. The embryo blossoms of the peach, the apricot, the nectarine, the almond, the pear, the plum and the cherry, nearly all died at the touch, only a few of the two latter left to give promise of fruit. The summer drouth and the early frosts had so ripened the apple that its buds are nearly unharmed. The covering of snow that came with the wave of cold, saved many a tender plant which otherwise would have been destroyed.

This sudden change and its consequences have taught us many lessons, some of which are fearful ones. Let us therefore take them as they are, and learn to guard against their influences as much as possible.

It is our purpose to study the subject in all its bearings and we shall from time to time give the result to our readers.

The first shock of winter has been hard on almost all kinds of stock, and it will stand us in hand, to give them our best care for the remainder of the winter. Do not allow yourselves to be deceived by a few warm days in this month, to slacken the care that is thus due, but to see that all are well protected from the cold winds and driving storms, that so often occur at this season of the year. The loss of hogs by the cold has been very large, enough to tell on the next year's supply of store hogs. Those lost in the delayed trains only lessens, by so much the supply of meat, while those on the farms are so much from the productive stock of the country.

Peach trees will soon show by the dead and shrivelled condition of their branches how far to cut back. The pear should be cut back to within three or four buds of the old wood, that is leaving so much of last year's growth. **KEEP YOUR KNIFE OFF FROM ALL FRUIT TREES AND SHRUBS WHILE THEY ARE IN A FROZEN STATE.** On warm days when the frost is out, you may begin to prune your orchard and to cut back your raspberries. The trees damaged by frost can also be cut back and thinned out.

If the fire wood is not cut and piled up, see to it at once, for next month the active duties of the farm begin, in such earnest that you will have little time for such work.

Have all your tools in order, so that when you want them for use they will be ready. If you have not all you want, give your orders in season for the new ones.

Prepare to fill the blank spaces in your orchards and to extend them.—New trees should be planted every

spring, in order to keep up a good succession of fruit. In attending to this be careful not to overlook the small fruits, the new grapes, such as Concord, Hartford Prolific, Delaware, Diana, Norton's Virginia, and Taylor's Bullit. Spring wheat may be sown the last of the month, if the weather is favorable. In this case see that no water can stand on the newly sown grain.

Overhaul your garden seeds, to see what you want and order them in season. Look out for old onion seed, there is plenty of it in market, don't buy an ounce of this seed unless of reliable parties. The new demand at three and four dollars a pound is bringing out the old seed, that would not at the time when it was new and fresh bring over fifty cents a pound at wholesale—it will now go into market in some shape.

If you want trees or plants, order them direct from the nurseries, and have nothing to do with traveling agents, either domestic or foreign.

Fencing.

Farmers are too apt to delay putting up fences until the spring work is upon them. In the heavy timbered portion of the State a rail fence is admissible, but on the prairies a post and rail, picket or board fence are the only dead fences that should be put up. These will stand against the prairie winds. To a great extent live fences will soon supply the demand, but these cannot be made in a month, or a year; and in the mean time dead fences must be had to secure the crops. The post and board fence is the most generally used, and the most common way to set the posts is with the use of the spade or common auger.—Now in our humble opinion, a post

should not be set with either of these implements, unless in case of necessity, where the ground is too hard to drive them. Posts should be got ready by the middle of January, sharpened and hauled on to the line where they are to be used. They should be cut seven feet long, and when sharpened, see that you sharpen the top or upper end of the post, as we know by experience that a post set top end down will last much longer than one set with the but end down. We are not disposed to argue this point or to attempt to account for it, as we are positive that it is a fixed fact, and will bear any amount of scrutiny. It will cost no more to put the top end into the ground than the but, and if there is no advantage, there certainly is no loss. In sharpening be careful to leave the point in the centre, and dress down all sides alike, that is to the same bevel. During the January thaw is a good time to drive the posts, the ground is then soft and yielding, when two men will set from one to two hundred per day, depending on the size of the posts and condition of the soil. With a spade or post auger, one hand will set, say, forty posts, but to do this he must work very hard, nor can he set them when the ground is very wet, which is just the time to drive them. In seven and a half days at this rate he will set three hundred posts. To sharpen three hundred posts will require three days of ordinary hands, though a good chopper will do them in less than half the time, and to drive them, two days with two hands, making a total of seven days, nearly the same amount of work. But this latter can all be done when the former is impossible. With common farm hands, such as can sharpen and drive

the posts, you will not get on an average more than twenty set in a day.

Posts that are driven two and three-fourths feet into the ground, as is contemplated with a seven foot post, that is four feet and four inches above ground, will stand much better than when put in any other way, and we have a fancy will last a much longer time. The earth is packed so close about it that the air is to a greater degree excluded, and does not undergo so many changes from dry to wet and wet to dry.

A fence set with the spade or post auger, is very apt to be leaned over by the winds, or be thrown out with the frosts, a misfortune that seldom occurs to those driven as described. For the past twenty years, we have been in the practice of driving all our posts, and visitors have always remarked the regularity of our fences.

In setting the posts, we put them eight feet from centre to centre, using a sixteen foot board. As these are generally cut longer, many of them overrunning eight inches, we never saw them off, but lap the end back on the last panel, and use a twelve or twenty penny nail by driving through both boards. In this case the end of the last panel is not nailed until it is ascertained whether the next board will lap over or not. When it does not lap over use a common eight penny fence nail, and if it laps a larger one. In this way the fence is quickly made, with the same cost of nails, and no saw is used. In case the fence is taken down for removal there is less waste of material, while the saving of labor in putting up, is no small item.

In this mode of making fence, you do not have to wait for the boards, but

can drive the posts and put up the boards when it is convenient to get them. We very much dislike to see farmers making fence when they should be at their spring work.

Dead fences are a great drain on the farmer's profits, and should be replaced with live ones as fast as possible, to this end we have Osage for high land and willow for low land, and in addition to these two great sources of supply, we have the barberry and numerous other plants and trees of more or less value.

White Willow Impostors.

A few days since we received a call from a gentleman, who desired an agency to sell nursery trees. He was canvassing for the White Willow, and at the same time could take orders for fruit trees. On inquiry, he stated that the White Willow was grown at Carbondale, and sent out by one J. W. F——, who had a large stock.

The idea of getting the white willow pure and uncontaminated, from the deep forest of Southern Egypt, struck us as novel, and we cross examined our visitor rather closely in regard to the matter. The result was, that he had met this willow man at Carbondale and agreed to canvass for him, and was to receive a dollar a thousand for cuttings sold, for obtaining the orders. The delivery and collection to be done by others. The price fixed to customers was to be \$5.00 per thousand. So far all right, if he could connect the sale of fruit trees from some reliable nursery, the thing would work to a charm. Smelling a big mice, the offer to sell fruit trees was declined. At this our man was somewhat disappointed, and said if he could not com-

bine the two, there was no use to make the effort and he should drop the business.

We at one wrote to an old and well-known citizen of Carbondale in regard to the matter, and here is the reply:

"In answer to your inquiry I have to say, that no such man as J. W. F—— resides either here or in this county; nor does any one grow the white willow at this point, or to my knowledge in Southern Illinois."

Thus the riddle is unravelled. The swindle was to be located here, with a confederate to cut the willow along the Drury or Cache rivers. One of whom would take the orders and the other deliver and collect. The endorsement of some nursery establishment was needed to make the thing work.

We have no idea that the thing is dead, but that it will turn up in some other place. White willow from Carbondale may vere properly be declined by those making willow fences and wood lots.

We had supposed that almost every phase of swindling in white willow had been exhausted last winter. But here is a prettyscheme that gave good promise of working well, but which like the peach crop of Egypt has met a chilling frost.

For the benefit of all such petty swindlers, tree dealers and their victims, we copy from Purple's Statutes, page 393.

"See ch. 111—If any person or persons shall, knowingly and designedly, by any false pretence or pretences, obtain from any other person or persons, any chose in action, money, goods, wares, chattels, effects or other valuable thing whatever, with intent to cheat or defraud any such person or persons of the same, every such person so offending shall be deemed a *cheat* and upon conviction, shall be fined in any sum not exceeding one thousand dollars, and imprisoned not exceeding one year, and shall be sentenced to restore the property so fraudulently obtained, if it can be done."

If the above law was occasionally put in force it would be of immense benefit to the fruit growing public.

We trust our readers will keep watch of this class of men hereafter, and save not only their money, but much bitter, disappointment.

To send men into the Winnebago swamps to cut white willow and to buy bogus cuttings of the honest Dutch farmers of Pennsylvania has had its day. Had it not been for the drouth that swept away the evidences of the swindle, some *responsible* parties would have had a rather unpleasant time, even now the thing is not quite closed up, further growth is needed to show the cheat. Sorgho has had a ten years' struggle with patent pans, rollers and seed men, then why not other valuable products have their day of trial.

Income Tax.

The Assessors of the State of Illinois, in convention last May, adopted the following example as a guide.

INCOME OF A. B.—(FARMER.)

Do not value increase of stock 4 years old and over.	
Am't of farm produce of 1862, sold previous to Jan. 1, 1863.....	\$278 00
2,000 bushels of corn unsold, sold previous to Jan. 1, 1863, at 18 cts.....	360 00
240 bu. wheat, sold previous to Jan. 1, 1863 at 60 cts.....	144 00
135 bushels potatoes sold previous to Jan. 1, 1863, at 40 cts.....	54 00
200 bushels oats, sold previous to Jan. 1, 1863, at 15 cts.....	50 00
40 tons of hay, at \$4 per ton.....	160 00
All other orchard and farm produce.....	60 00
14 calves of the spring of 1862, worth Dec, 31, 1862.....	70 00
Increase in value on 16 yearlings over the cost of feed consumed.....	32 00
Increase in value of 20 two-year olds, over cost of feed.....	40 00
Increase of all other cattle over cost of feed	26 00
4 colts of the spring of 1862, worth Dec. 31, 1862.....	100 00
Increase in value on 3 yearling colts, over cost of feed.....	30 00
Increase in value of 4 two-year old colts, over cost of feed.....	32 00
Increase in value on other horses and mules	26 00

50 pigs of the spring of 1862, worth Dec. 31, 1862.....	75 00
Increase in value on other hogs over cost of feed.....	60 00
Amount made in buying and selling stock in the year 1862.....	125 00
Amount received for personal services or salaries, in the year 1862.....	42 00
Amount received for rents and interest...	182 00
Income from other sources than the above	63 00
Lambs as the increase of sheep at \$1 pr hd.	
Number of pounds of wool sold.....	

Total income from all sources.....\$2,008 00

DEDUCTIONS.

Take no account of hay and grain consumed on the farm.	
Am't exempt by law.....	\$600 00
Am't paid for taxes for the yr 1862	127 50
Am't pd. for labor on the farm do	285 00
Value of board of hired laborers..	143 00
Amount paid for rent.....	116 00
Amount paid for insurance.....	31 00
Amount necessary repairs to farm and buildings... ..	28 00
Interest or encumbrances on estate on which the person resides....	46 00
	\$1,366 00
Total deductions.....	\$1,376 00
Am't liable to an income tax of 3 per ct..	\$ 632 00

There are scarcely two Assessors who adhere to the same rules, except in regard to the most prominent features of the law ; for the reason that they don't understand the law themselves, when some new matter comes up, not particularly provided for in the enactment.

By the above list farmers will see what they have to account for, as an income tax, and should keep an account accordingly.

We have a large number of very stupid assessors, besides many who do not understand the law, in fact, no two men agree on all points, and it is to be hoped that it will assume a more definite shape. That the law is wrong in itself there can be no doubt in our mind. We do not hesitate to say that we are opposed to it in toto. We are not opposed to taxation, but on the other hand think it highly necessary, but in this income tax the wrong parties must pay. It is an unequal tax, and it is for this that we object to it. If the farmer is

taxed why not tax his land and his capital in stock and other personal property. If he has more land than he wishes to pay tax on, or finds profitable, let him sell it to the man who can make it pay. Under the present law the old land sharks are protected and the industrious, hard working farmer must pay. The man who holds a lot worth ten thousand dollars, for an advance pays nothing, but the man who improves his property must pay. Thus making one class pay the whole expense of the war. Not long since we saw an account of three individuals in Chicago, one of them a merchant of moderate means, paying a tax of three per cent., on a hundred thousand dollars, and two among the most wealthy in the city, worth at least a quarter of a million each in real estate paying nothing.

Why? because they chose to invest in real estate that would improve in value as the city improved, instead of doing business. We know them personally, and know too, that nineteen-twentieths of their worth has been derived from the natural advance in their property, caused by the growth of the city. If this property increase in value twenty thousand a year, they pay no income tax on it, while the growth on the farm stock that feeds on his acres must be accounted for.

A farmer who devotes a portion of grounds to the growth of trees and plants, must pay a licence of ten dollars, and then an addition of three per cent. on his sales, for income. At the same time, the law says, that products mean every species of thing grown or produced on a farm. The commissioner who in the face of this law decided that he should pay a license, should be

awarded a leather medal at every State and county fair throughout the country.

We last year purchased of a farmer a thousand currant bushes, and the assessor decided that he was a nurseryman, and should pay a license as a nurseryman. This man grows his own nursery trees, and of some sorts has an excess which he sells, probably to the amount of one or two hundred dollars a year, and for this he must pay ten dollars license, and three per cent. income. In this case the law is not at fault, and the blame is with the officers. But it may be asked why pay it? stand a suit on it. This is all very well, but most farmers prefer to be swindled out of ten dollars, rather than lose a hundred in going to law.

We want plain, simple laws, and a set of honest, intelligent officers to execute them, but instead we have a set of blatant politicians, with now and then an honest man, who gets in through mistake.

Ohio Wool Growers' Convention.

In accordance with the expressed wishes and advice of many members of the Ohio Wool Growers' Association, notice is hereby given that there will be a meeting of the Association, together with a public Convention of Wool Growers and those interested in wool growing, in the city of Columbus, on Tuesday the 5th day of January, 1864, to meet for the presentation of business, at 10 o'clock A. M. on that day, and to continue in session at the pleasure of the Convention.

A public Address will be delivered before the Convention, on Wednesday evening, Jan. 6th, by Hon. HENRY S. RANDALL, of Cortland Village, N. Y.

We cordially invite the attendance of all persons interested in the production, handling or consumption, of sheep and wool.

S. D. HARRIS, President.

J. PARK ALEXANDER, Secretary.

There should be a large representation from this state. This convention cannot result otherwise than beneficial to the wool growing interest. Washing of sheep will doubtless be settled for or against at this meeting.—Ed.

Poetry.

From the Champaign County Union.
King Cotton.

BY J. S. WOLFE.

That wonderful King, whose surname is Cotton,
(He began to feel weak, and withered and rotten
From the dawn of Rebellion), had a moment's reflection,

Inspired by the news of the Northern election;
So betaking himself to a glen in the wild,
Where Treason had nursed her belligerent child.
Enthroned on a stone at the foot of an oak,
Forth in accents of wailing the banished King broke:

"In the sunlight of Peace, when the spindle and loom
Were sounding instead of the cannon's loud boom—
When the shuttle was netting my delicate threads,
For human apparel and clothing for beds—
When I mingled in peace with the warp and the woof,
Ah, then I was KING, and the crowd stood aloof!
Then I freighted the vessel deep down in the water
With the weight of my body—for cash or for barter;
Then I sped on as rapid as engine could whirl
To pass through the hands of the factory-girl.

(Do plants ever love? Dr. Darwin, in rhymes,
Has told how the plants have their lovers at times.
And I, though a King, have felt tender "in spots"
While these nymphs have caressed me and tied me in knots;

And, like others in love, found it bliss to be seized
By these spotless young damsels, and sensibly squeezed.)

Yes, then I was King, with the girls on my side,
My white locks were honored, and flattered my pride,
And daily, by thousands, the beautiful girls
Were anointing my locks and applauding my curls.
I was feasted, and feted, and petted and dandled,
And admired by the millions by whom I was handled;
I danced on the spools, on the spindles and reels,
And felt always at home—as an honest man feels.
The stories I told, and the yarns that I spun,
Were the wittiest known since the world was begun;
I was twisted and wove up in every variety,
And received with delight in the best of society:
I was warmth to the back, and ermined the breast
Of the dignified host, and the worshipful guest;
To men I have proved the best friend ever given—
I've been "bosom companion" to most of the women,
Who assured me that I, for my delicate arts,
Should be cheered by their friendship and warmed by their arts.

I was King in the market where money is made—
I ruled in the meetings of each board of trade—
I traveled on ocean, on river and road,
And was always considered the "cream" of the load:
Whenever a journey I chanced to commence,
The bullion was ready to pay the expense;
I was lifted, and carried, and carted around—
My imperial feet never touching the ground—
And I always was sure of a rousing ovation
In the councils and workshops of every nation.
The kings and the queens and the autocrats fine
Sent their merchantmen, coasters, and ships of-the-line,

To escort me from India, from China or Texas,
With such pomp and parade as oft did perplex us.
I figured in fashion, and often in Paris
Have made up the ruffle and frill of an heiress:
All were proud to present me, and prompt at my beck
The banks would honor my heaviest check.

When I slumbered in bud—when in blossom I laughed
'T was the same as receiving a million by draft;
When I emptied my "bole" of its flocculent locks
The "bulls" and the "bears" left their gambling in stocks,

And hastened, all eager to furnish the "tin"
To pick me, and "tote" me, and help me to "gin."
Sure, wasn't I King! 'Tis no prevarication
To say I was courted by all the creation;
But alas, my ambition! it shivered my throne,
Divided my kingdom, and left me alone—
Broke my sceptre to atoms, and dashed to the earth
All the hopes I have had from the day of my birth.
Here, throneless and houseless, in this gloomy dell,
A fugitive outlaw hereafter I dwell;
By rude "speculators" I'm constantly hurt,
They "conscript" me, and burn me, and roll me in dirt;

They cobble up walls with my body and bones—
Hold me "cheap as the dirt," or a cartload of stones;
They smoke me with powder and stain me with blood,
And smear me all over with water and mud.
I am therefore determined to vacate the field
To some other monarch my kingdom I yield,
And proclaim to the world, from this stone by the oak,
That Cotton is fallen and the King is "flat broke."

Correspondence.

For the Illinois Farmer.

CHATSWORTH, Ford Co., Ill., Jan. 15, '64.

MR. EDITOR:

The farmers in this neighborhood are turning their attention to flax growing. We have had but little experience in raising it, consequently would like to ask a few questions of some one that has tested it and had more experience in raising it. It has been raised here entirely with reference to the seed, but now good flax straw is quite an object. We have sown about one-half bushel to the acre, but that is not enough to get long straw. If we were to sow one bushel or one bushel and a half to the acre, would we get as much seed as though we had sown less? If it will not yield as much seed how much difference would it probably make? How much seed would you recommend to sow to the acre with a view of raising both? How much straw is an average yield when about one bushel is sown to the acre? How many tons of straw does it take to make a ton of fibre? What is the best kind of machine for breaking it, and how much does it cost? What is the fibre worth per ton generally? Where is the best market for shipping the fibre? Chicago, I think, intends to make a monopoly of it, consequently if there is any other place where there are several manufactures it would be likely to bring more.

Please answer in your next issue, and you will oblige me.

WALLACE W. WICKS.

The culture of flax is spreading very rapidly, and can now be reckoned among the best paying crops.

In sowing for both seed and lint a bushel of seed

is the usual amount sown to the acre. There is no crop more benefitted by manure than flax, and where it is possible to use it even in small quantities, it should not be neglected. When highly manured and sown thin the straw will be coarse with lint of poor quality; to make the best lint thick seeding is necessary. We have not been able to see that a better yield of seed is obtained in sowing half a bushel of seed, and have always preferred a bushel of seed for this purpose. In very rich land a bushel and a half of seed would make an excellent quality of lint. In Belgium and Russia, where the finest linens are produced, from two to four bushels are sown. The richer the soil the less seed is required.

In sowing the land must be made fine by repeated harrowing and rolling, if at all cloddy. When the seed is sown, lightly harrow in and then roll. It is very important to roll the ground when the crop is to be cut with a reaper.

The Belgians sometimes sow a crop of carrots with the flax, which produce a good crop. Mr. Phinney, one of our neighbors, made trial of this last season, but in consequence of the long and severe drouth, it was a failure.

An ordinary yield when half a bushel has been sown is about ten bushels, but with a bushel to a bushel and a half of seed on land well manured, fifteen may be called a good crop.

A ton of straw will make 500 to 600 pounds of fibre, which is a fair average per acre, though twice that is grown in good seasons.

The Mallory machine has a high reputation but there is one in Chicago probably better. Of the prices we know nothing at present. One machine will do the work for a neighborhood.

As to the prices, we have seen no list of late. By the time your crop is ready you can post yourself on the best market. The Chicago firm that you allude to have a superior machine and can afford to pay the highest price for the straw; at the same time we presume they will sell your fibre on commission.

You can sow flax as late as the middle of May, but the best crops are sown the last of March and early in April. Use a roller in seeding and see that the soil is well comminuted; to do this sow and roll the day you plow. You may in this case harrow and sow afterwards and roll the ground, as this will in soft ground cover the seed.—Ed.

For the Illinois Farmer.

Wintering Grapes—Effects of Frost.

BLOOMINGTON, Ill., Jan. 1864.

M. L. Dunlap, Esq., Dear Sir:

The severe cold of the first of January has left its

traces. The peach trees are all gone, tender pears, apricots, a part of the cherries, and to some extent the apples. Grape vines not covered have suffered severely, and some varieties are entirely killed. The most hardy of all is the Concord; next comes Taylor's Bullit, a white grape. Cuyahoga or Coleman has stood well. There are some new varieties more hardy than an oak tree—more so than the Concord, but they are as yet little known on account of their high price. North Carolina Seedling, Mary, Arkansas, Winslow, Raisen, Mary Ann and a dozen other new sorts, are oak tree grape vines.

The covering of my ten thousand vines could not have cost me more than twenty dollars, but the devil persuaded me to become a careless American, but it is the last time, as I shall protect all my grapes hereafter. Hartford Prolific is a very hardy grape.

I have been experimenting to see what kind of wine would first freeze. This is a new subject, and one that I have not seen noticed before.

I must say of the Delaware that it has suffered very severely this winter. Yours truly,

H. SHRODER.

—The Dr. is one of our live men, one who will never rust out.

At the winter meeting of the State Agricultural Society he took the first premium for essay on market gardening.....\$ 10 00
1st premium best 3 bottles Catawba..... 10 00
1st " " 3 " Isabella.... 10 00
1st " " 3 " Delaware... 10 00

Total..... \$40 00

Pretty well for the little Dutchman, when we have so many great grape growers and old wine makers in the State.—Ed.

For the Illinois Farmer.

Patent Bee Hives.

THREE OAKS, Mich., Jan 30, '64.

MR. EDITOR:—By inserting the following card in your paper as long you can afford, you shall be entitled to an individual deed of my Round Glass Hive and Box in your name, or in the name of some friend you may designate.

W. WARREN.

Use the Round Glass Hive and Honey Box, with barrel cover, a double ventilating hive, excelling in honey and wintering bees; easily made, costing but little more than the common box hive. Hive and honey took the first premium at the Illinois State Fair in 1863. Save agent's fee. Two individual rights by mail for \$5. Send stamps for illustrated circular, or see the one put up at your post office.

W. WARREN.

THREE OAKS, Berrien Co., Mich.

We have inserted the above, not for the deed to use the hive, for we shall be at no cost to try the

experiment, but for the purpose of allowing the beekeepers of the State a chance to test the value of the awarding committee in this particular case, an award that we think was made without due consideration. Our readers will know where to apply for the right and a drawing of the hive.

We think the hive too expensive and complicated to be of practical use, but as the committee have decided it to be the best, we can do no more than to recommend that they verify their opinion by testing the hive, and to this end Mr. Warren may send them all the deeds due us for this notice.

For the Illinois Farmer.

Hand Sowing Machines—Stafford's Cultivator as a Harrow—Combined Planter and Roller—Washing Machines and Clothes Wringer—Ridges for Sweet Potatoes—Wild Morning Glory.

M. L. Dunlap, Esq., Dear Sir :

May I trouble you to answer a few inquiries?—I want a hand sowing machine and a cast iron roller, such as you have. Will you tell me what is the diameter of yours, about the price, and where I can obtain them? I am writing to-day to Messrs. Barber & Hawley, of Decatur, for Stafford's patent two-horse cultivator. You speak of harrowing with it—how is that done? I have Brown's corn planter;—you speak of attaching the planter to the roller, and then the planting and rolling is done at the same time. How would you be able to turn with this attachment? Can two horses haul the whole without difficulty? In a former essay on corn planting, you speak of placing on the roller a Δ , to mark rows for the planter.

I want, also, a good washing machine and wringer. These machines are numerous, but a good one is desired. Putnam's wringer is much praised.

How do you ridge with the cultivator for sweet potatoes and Irish? Do you plant the seed of sweet potatoes, or always sprout them?

I am much pleased with many of your suggestions about corn, and farming generally. Will you oblige me by a reply to my enquiries and much oblige one of your constant readers and your friend.

Yours, &c., very respectfully,
S. W. ROBBINS.

N. B. As a corn cultivator it has four shovels and for other purposes two more are added—can you harrow with shovel plows? There is a vine in Sangamon river bottom called a potato vine, which is very troublesome, and when once fully growing no ordinary shovel plow will kill it or extirpate it. Do you think the two-horse cultivator will fight it successfully? Have you any knowl-

edge of this vine?—it is abundant on this farm.

S. W. R.

—We will attempt to answer our correspondent in regular order.

The hand machine spoken of is Copeland's and made at Loda (Okalla P. O.) Station, on the Chicago branch of the I. C. R. R. Whether they are now made at that point, we cannot say. Cahoon's hand sower can be had of A. H. Hovey, Chicago,

The iron section roller was had at Morris, from the shop of Isaac Atwater. The last we heard from them J. C. Carr had succeeded to the business, though much to his regret the demand was more limited than was profitable. The farmers must and will give up the use of wood land rollers, so soon as good cast section rollers are put on sale. The cast rollers sent out from Boston and Chicago, were perfect horse killers and disgusted the farmers. If our implement makers will but get up good ones, they will soon find customers; but they must not be in too big a hurry, old prejudices must have time to wear off.

The cultivator is furnished, when ordered, with two extra shovels, which make it a six-shovel cultivator. Run these two or three inches deep, and you have a cultivator harrow of more value than the old harrow. There is no reason why other two-horse cultivators may not add the like improvement; perhaps some of them do.

Brown's corn planter cannot be attached to the roller in its present condition. The planter must be geared to one of the sections of the roller, so as to operate it; add to this an apparatus for covering the corn an inch deep, and the thing is done. A patent was granted last December for such a combination, but we have not heard whether or not it will be sent out for the spring planting. In this connection the planter will not cost over fifteen dollars in addition to the roller. The following saving will be effected. Marking off one way, one harrowing and one hand to work the machine to plant. To harrow fifteen acres will require:

Two days, \$2 50.....	\$ 5 00
One " marking.....	2 50
" " planting.....	2 50
" " one hand extra.....	1 00

Total\$11 00

WITH ROLLER AND PLANTER.

One day planting and rolling, \$2 50, making a saving of \$8 50, or over half a dollar an acre. We know from several years' experience that the latter mode will insure a better stand of corn, and bring the crop forward much faster than by the old process. The after culture is much better done because the clods are crushed and the plants have a finely comminuted soil instead of a cloddy one, in which to send out their roots in search of food.

We saw a very good washing machine at the Macoupin county fair. It was made at Bunker Hill. We have mislaid the card and therefore cannot give the parties' names. It is the only machine that we have seen that looks as though it had merit, but even that we would not recommend you to purchase except on a month's trial, to see what effect it would have on the clothes. We have used one of Putnam's wringers for over two years and have no expectation of getting a better one. If there is a better one we have not seen it. The charge that the galvanized iron will rust the clothes, has not in this case been discovered.

In ridging up for the sweet potato with the Stafford cultivator, place the shovels so that the earth is thrown to the center. The plow is not used but you make the ridges by going three to four times on each row. You then turn and work down these ridges, making the center over the deep furrow. In this way the ground is thoroughly pulverized and ready for the plants. These are sprouts grown in a hot bed, and set sixteen inches apart in the ridge.

The vine mentioned is doubtless the *convolvulus panduratus*, sometimes called wild morning glory, wild potato, or man of the earth. Where it once gets a hold it is very troublesome. If the shovels of your cultivator are kept sharp they must destroy the most of them. We saw this weed in numerous fields in Mississippi, Alabama and Tennessee; have also seen it along the Wabash valley in Indiana.—Ed.

Horticulture.

The Extent of damage to fruit trees—Cotton Culture in the South of the State.

[Letter from Rural.]

CHAMPAIGN, Ill., Jan. 25, 1864.

The damage to the fruit crop by the severe cold is yet an absorbing subject to all classes of people, equal to those who buy and those who sell. We will, therefore give all the facts so far as they appear. Of the fruit district about Cobden, Anna and Makanda, we have spoken in our last letter, with the exception of trees that were budded last August and September. All of those budded above the snow-line or say eight inches from the ground, are killed; while those below that line, protected by the snow, are in good order.

At Duquoin and St. Johns the trees are less injured, though the blossom buds of the Peach and Pear are all killed, with a portion of the Cherry and Plum. The Apple to all appearances, are not injured in the least.

The following letter gives a gloomy account of the fruit prospect at Ashley, which we hope is overdrawn.

"ASHLEY, Ill., Jan. 22, 1864.

Mr. 'Rural'—Dear sir—My peach trees are all killed from one year to seven years old—killed to the ground. Also all my buds inserted this last Fall. An awful blow on all of us. My friend, Joseph Barber, lost 7000 three year buds, just coming into bearing. Very discouraging. I know not where to get buds and scions to work from—have you heard of any locality not killed West. All my roses, most sorts of pear, peach, the finer kinds of cherry, are all dead.

Truly Yours,

JOHN M. HUNTER."

In our own ground the blossom buds of the Almond are all dead. All of the heart and duke cherries, and about one third of the May cherry and half of the common morello. This is the first time that the May cherry has been injured during our acquaintance with it. The peach trees do not appear to be much injured, at least much less than further South. This is doubtless due to the drouth that lessened the growth and ripened up the wood before the early frost, that found the trees in the south part of the State in a more thrifty growing condition. At Cobden the cold on the first day of the month was nearly the same as here. Your proof-reader transposed the figures making it colder on the hills than in the valleys, which is not the case. All of the peach orchards near Cobden are on the hills. They are never planted in the valley or near the base of the hills. On the hills the cold was eighteen, and in the valleys twenty-two degrees below zero. At that point the cold is always the most intense in the valleys, while further north it is the reverse. But to resume. The pear trees are to some extent injured in the last year's growth. This should be cut back to within three or four buds of the old wood, when it is probable that no serious result will follow. The apple, plum and May cherry are not in the least injured in the tree. Had the same degree of cold occurred a year ago, the apple trees in the nursery and probably the orchard trees would have suffered the same as they did in the winter of 1856, as the growth the preceding autumn was a rank spongy one, illy adapted to stand the cold. If the drouth and frost cut off our crops last season, it has made us some compensation in protecting our fruit trees from destruction.

While in the south part of the State we found among the people a wide difference of opinion in regard to the cold of previous years, Mr. Frick, of Jonesborough, has a memorandum of the weather for some years. In February, 1856, the thermometer was down to 22 degrees below zero, and a few days later to 14 degrees. The peach crop was killed and trees slightly injured. The same winter nearly all the peach trees in the north and central parts of the State were killed outright. Between the years 1856 and '64 the thermometer seldom went as low as 2 degrees below zero, and at this point 12 degrees below, growing seven successive crops of this fruit. We much doubt if any other of the whole country has done better than that.

Last autumn nearly all the nurseries sold out their entire stock of peach trees, there having been an unusual demand for trees. As few of these trees were set in orchards, but *heeled in*, they are now in good order for planting. Nor do we believe there is a large percentage of trees entirely killed; therefore, with the exception of the loss of the crop for

the current year, and half that of the next, we look hopefully forward to prosperous times for the orchardist, and happy ones for the consumer, who will find them more abundant than ever. In the mean time, the apple, the cherry, the plum, the grape and the small fruits will increase in volume in our markets and on the tables of the farmer.

In a continental climate like this, we must expect just such visitations of cold as those of '55, '56, and '64. But as the value of shelter is better understood, we shall to some extent be enabled to guard against its severity. Our shelter belts of silver maple are but five to six years old, yet they have been of no inconsiderable advantage in this cold ordeal through which we have passed.

COTTON AT COBDEN.

The field culture of cotton in the south part of the State is no longer an experiment but a fixed fact, and must hereafter claim a place among the staple products of the farm.

Last season Major S Stewart had thirty eight acres that yielded six hundred pounds of seed cotton to the acre, and T J McClure forty acres, yielding the same amount. The growth was rampant, and would have turned that amount of clean cotton had it not been for the early frost. Here was two hundred pounds of clean cotton to the acre worth, at fifteen cents a pound in the seed, ninety dollars an acre.

These parties now think that with an improved two-horse sulky cultivator they can grow cotton at about half the cost of last year, and are to plant a much larger crop. These crops are grown on the Mississippi bottom near the mouth of Clear Creek.

Mr. M. Clemons, at Cobden, has a steam gin. The whole cost of engine, gin, press and buildings was thirteen hundred dollars. He has ginned fourteen thousand pounds and has not quite half of the crop grown in the neighborhood ginned. As twelve hundred pounds of seed cotton makes a bale of four hundred pounds, he will make some twenty-four bales. He has paid for this cotton fifteen to sixteen cents a pound in the seed, or an aggregate of \$4,200. It has been reported that the crop was such a failure that no further attempt would be made to grow it. The frost of the 30th August killed all in the valleys, and that of the 18th September on the hills. The heavy rains of June and the subsequent drouth had retarded the growth, so that the early frost found it in a bad condition, and it is estimated that only one-fourth to one-sixth of the crop as grown was saved, many of the best grown fields having been entirely ruined. At one time it was supposed that no cotton would be ginned at this point, but in this case the croakers must give place to stubborn facts.

The bulk of the crop has been grown in small patches of one, two and three acres. It is safe to estimate that in an ordinary season from four to six times the amount would have been produced. The present cost of ginning is two cents a pound. In the above estimate no allowance is made for the cotton reserved for domestic use, of which almost each family have more or less ginned. At the gin we found several of these grists for the family livery and for comforts. Mr. Clemens says that more than double the number of acres will be planted next year.

Seed is sold to planters at twenty cents a bushel, against two to three dollars a bushel last year.

At Jonesboro, seven miles south, is another gin that has done a much larger business, as has been the case at Dongola.

Notwithstanding the adverse circumstances attending the first attempt at the field culture of cotton, we think it will take rank with the most profitable crops. In this neighborhood the farms are small, running from twenty to fifty acres, and this so hilly and so full of rocks and stumps that our best farm implements cannot be used; and the old coulters or bull tongue plow is yet in use. But there is a greater drawback in the general ignorance of the farmers, who are, with the exception of the fruit growers and traders, mostly from Tennessee and Kentucky. School houses and agricultural journals are alike almost unknown.

The next half a dozen years will regenerate the dark spots along the grand chain, in proof of which, houses with the chimneys on the inside, school houses and churches are beginning to appear. To grow cotton or crops successfully, brains are an essential element.—*Chicago Tribune.*

Great destruction of the peach crop— The trees supposed to be Badly Injured by the Cold—Fruit Prospects.

[Letter from Rural.]

COBDEN, ILL., Jan. 18, 1864.

A great calamity has befallen the fruit grower of this part of the State. The next peach crop, if not a large part of the trees have been utterly ruined. The great cold wave that rolled down from the Arctic regions on the first day of the year, has crushed in its pathway every blossom bud of the peach, the apricot and the nectarine, from the northern limits of this fruit southward, beyond the limits of the State of Tennessee, if not far into the States South. Never within the history of the West, has there been such a wide spread disaster—never such a far extended wave of Arctic cold.

Near this station the peach orchards numbered not less than 50,000 trees; at Makanda, seven miles north, about the same number; and at Anna, seven miles south, some 20,000; making, within twenty miles, 120,000 trees. These are worth, including the land and buildings, nearly or quite a half a million of dollars, an investment that has been made mostly within the past six years, and which would have been quadrupled in the next two years. That the trees are seriously injured, all admit; but it is difficult to judge of the real damage to a peach tree by the discoloration of bark. All are more or less injured, and many of the large trees that we have examined are dead to a certainty. We should not be surprised to find most of them killed outright, while, at best, they will be two or three years in recovering, and will in no event make good orchards. It will require twenty-five thousand dollars to replace these orchards with nursery trees to say nothing of the labor for four or five years to bring them into a good bearing condition. This estimate is for the peach on a section of twenty miles, but it is well known that there are large orchards, stretching from Pulaski Station as far north as Mattoon.

But to get the trees to replace these orchards, is the question, as the nurseys have been exhausted, of the stock and those budded the last season are

involved in the general disaster. It is probable some of them will be saved, where snow lodged among the trees of sufficient depth to cover the buds.

Unless the Michigan orchards have been more fortunate, the Northwest will be without peaches, at least the present year, and but small supplies for the next two or three years.

From what we have seen and heard we have no doubt that all the blossom buds of the peach are killed west of the Alleghanies, and at least a hundred miles south of Memphis, Tennessee.

The cold at this point on the hills was 18 degrees below zero, and 22 degrees in the valleys.

The peach had become a necessity to all classes of people, either in their ripe state, canned or dried. Last year hundreds of thousands of bushels of this fruit were grown within the bounds named, and to cut off this supply for a single year will be a hardship. Verily it may be said of a truth that the loss of a fruit crop is a public calamity. We have never been called an alarmist, yet the above will startle many an owner of a peach orchard, who is solacing himself with the idea that he may have at least a small crop, but on investigation will find that he has hugged a delusion. On our way to this place our enquiries as to the peach crop was answered—"all killed North, for so 'Rural' has stated in the TRIBUNE, but Egypt will have peaches enough." Alas for Egypt, the destroyer has passed over her rich orchards that we have so often seen laden with luscious fruit.

Since our arrival here, we have met the same answer, but now the excitement is intense, as we visit orchard after orchard, knife in hand and show the truth as it exists. We know that the wood and bark of the peach can be badly discolored and yet the tree survive; let us hope for the best, for even that is sufficiently unpleasant

THE APPLE.

The early harvest is the only one in the list at this point that appears at all injured, and on this a portion of the blossom buds appear sound. The apple crop, to all appearance, will be an usual one. We have examined a large number of varieties, and, with this single exception, have not found a twig injured by the cold. Orchardists at the North will do well to take a look through their grounds.

THE PLUM.

The trees do not appear to be injured, but the blossom buds are dead.

Thus far this crop has been of no value here, as the love of the curculio for this fruit has been too great to withstand his attacks on it, though just now orchardists suppose themselves possessed of a remedy that will prove effective, but they must wait another year to give it further trial.

THE CHERRY.

The blossom buds on the May cherry, or, as it is called in the north part of the State, Early Richmond, are more than half killed, but enough is left to make a fair crop, if they should open as their present appearance indicates. The common Morrello buds are still worse injured. On the Duke and other sweet cherries scarcely a bud is left.—The trees are apparently not seriously injured, especially the May cherry.

GRAPES.

The grape crop at this point has thus far proved

a failure, on account of the rot. In examining the vines they do not appear to be much injured. This may be deceptive, however, and may not show the effect of the cold until they begin to grow in the spring, but now the canes look sound.

STRAWBERRIES.

Of course the snow covering that came with the cold has protected this crop from harm. The drouth and white grub combined have injured the prospect, and it is estimated that at best there can not be more than two-thirds of the quantity grown last season.

VEGETABLES.

Potatoes, apples, and other vegetables are badly frozen, and their loss will prove a serious inconvenience. Sweet potatoes for seed will be a scarce commodity.

ANOTHER STORM.

Yesterday morning was clear and spring-like; the snow which was about three or four inches deep, was rapidly melting, and the roads in places became muddy. During the afternoon it clouded up, and at seven o'clock it began to snow; great flakes came down like a northern winter, thicker and faster; the wind moaned among the hills, and soughed through the forest walls, that stood but a few rods from our sleeping room. We never witnessed a wilder night, the wind and snow beating that of the never-to-be-forgotten Thursday night which closed the old year, and only lacked its intense cold to be as fearful. Nor have we ever known a greater fall of snow in the same length of time in the deep forests of New York, as fell within the past night. The snow is now two feet deep on a level in the woods, an amount in this part of the State (lat. 37 deg. 30 min.) before unknown to either the oldest inhabitant or his father. At this writing it is still snowing.

We shall mail this letter to-day, but if the storm has been as severe north as here, it will not reach you in a week.

To-night was set for a grand gathering of the fruit growers of this section, numbering some forty establishments, but of course it must be delayed until they can shovel out a passage-way among the deep gorged, narrow lanes that are dignified with the name of roads. During the previous storm, thousands of hogs, that have mostly been in the woods, were frozen to death, and those which escaped will have the prospect of starving to death for the want of food.—*Chi. Trib.*

Further about the Fruit Crop—Sweet Potatoes to be Sent to Market throughout the Winter—Varieties of Fruits—Cotton growing.

COBDEN, Ill. Jan. 29, 1864.

We met a large number of the fruit growers on the evening of the 18th. They all concurred in the views that we expressed in our last letter, in regard to the fruit prospect and the damage to the trees, both grafted and seedling, are damaged, and that the fruit is killed.

On further examination, we find the older peach trees the most injured, the young orchard in some cases being but little affected.

It is said that there is never a loss without some

little gain. In this case, some of the fruit growers are rejoicing that the curculio, the worst enemy of the peach, must starve out for the want of his favorite fruit to breed in. But we apprehend that this will be about as futile as the idea of shutting up the ports of the rebels, and thus starving them out. Enough of the vipers will live for seed,—so of the curculio,—they will breed in the apple, when they can do no better, and though greatly thinned in numbers they will increase as rapidly as the peach trees recover. The only reliable mode to get rid of either is to kill them off.

SWEET POTATOES.

To supply the loss of the peach crop, to some extent, large quantities of sweet potatoes are to be planted; in fact, this crop has been steadily gaining in popularity, and must become one of the great staples of the garden at this point. The Nansmond is the principal variety grown. It is early and very rich and a most excellent keeper. We find them on the tables here instead of the Irish potatoes. The farmers keep them in their cellars nearly in the same manner that we do Irish potatoes, but they do not keep as well as in a regular sweet potato house. Mr. J. W. Tenbrook, the sweet potato king of Indiana, and other gentlemen associated with him, are here making arrangements to put up a mammoth sweet potato house, with a view to supply your city with this excellent vegetable throughout the winter. The building is to be twenty-four feet wide and a hundred feet long and two stories above the basement, and is estimated for ten thousand bushels. These are put in bins of twenty bushels each, and filled in with dry sand. They are to be shipped in cars lined so as to exclude the frost, and with a stove to save them in any event; for if the sweet potato becomes once chilled, or the temperature falls below 40 deg., it soon spoils, or at least loses that sugary sweetness that makes it so palatable. By this plan the people of your city can have this potato for six months longer than usual, as this house would give you a daily supply of seventy-five bushels, an amount totally inadequate to the demand after they had once become accustomed to their use.

This is the first attempt of the kind in the United States to supply the North, and if successful will be followed by others. The sweet potato in these houses will keep until the next crop comes in, or to the last of June, leaving a narrow space of two months.

The present stock of sweet potatoes for seed is mostly in the hands of speculators, and will be placed in the hands of parties to sprout on shares, and the plants sold at high prices. Farmers should keep over their seeds when possible to do so, so as not to be subject to large expense for seed. A few bushels can be kept through in a warm room, by mixing in dry sand, providing the potatoes have been dug before frost, and not bruised before packing.

As we have made some improvements in the preparation of the ground and culture of this potato, we shall give a chapter on the subject in season for use.

Experience has demonstrated that certain kinds of peaches, pears and apples do much better than others. So highly is this valued that a fruit grower remarked to us that the killing of the orchards at this time would be no great loss, as it would sweep the orchards of thousands of worthless trees, that

would be replaced by those enough more valuable to cover their loss in a short time. If the orchards of peach, pear and apple were to be replaced, three-fourths of the present trees would be discarded. If this is true of this part of the State, it is no less true in others. And is it not time that farmers and others setting trees should investigate the subject, and no longer depend on quack nurserymen and interested tree dealers? If they cannot get the varieties best adapted for them, let them set out seedlings and graft them with the varieties wanted.

Let us ask what commercial nurserymen know in regard to varieties? Just as much as the dry goods dealer does in regard to the goods that will sell, when his blandishments are added. The one buys bright colors and the other cultivates strong and showy growers. Let fruit growers order what they want and take nothing else; failing to get it, do their own grafting.

THE ROT.

This is a disease that attacks certain varieties of the peach and the apple in this part of the State. Thus far a few varieties of each have been exempt under all conditions, while the others are more or less healthy at times, but not being reliable should be rejected.

As many northern men continue to come here for the purpose of orcharding, and supposing that in such a favored region all varieties will do equally well they have ordered their trees without regard to the facts as they have been proved to exist, and the result is loss and consequent discouragement.

We have not time now to write upon this subject but will do so soon.

The culture of cotton is engaging no small attention, of which we shall speak in our next.

The snow has settled and is now fifteen inches deep on the level. The natives are out in all sorts of improvised sleds and jumpers and enjoying themselves hugely.—*Chi. Trib.*

Tree Protectors.

We continue our record of comparative temperature, commencing on the 18th of December, the first zero weather of the season. Our experiments this winter include the temperature of three structures. The one which afforded the data for our table last year, eighteen feet long, twelve wide and twelve high, constructed of a double covering of boards, with an intervening space of six inches filled with sawdust, has again answered our expectations.

Another the same width and height, eighty feet long, made by nailing inch square strips, horizontally, six inches apart on each side of rafters, eight inches wide, constituting movable frames, the intervening space of eight inches being closely packed with leaves, with the intention of thatching on both sides with straw. The season, however, only allowed of placing the leaves, which unfortunately contained numerous lumps of snow. These having since melted away, on the occurrence of a warm rain, have left many loosely packed spaces, unfavorable to the degree of tightness desirable. The low temperature indicated in this enclosure, on the 1st and 2d of January, was probably owing

in part to a near vacancy in the leaves, admitting a current of air directly upon the thermometer.

The third structure, six feet wide, six high, and sixteen feet long, consists of a single covering of rough boards, one inch thick and twelve wide, nailed to the rafters after the manner of lapped siding reversed, beginning at the top, thus forming the shoulder of the joints upward, which it was proposed to render air tight by luting with coal-tar, the joints in the gables to be battened with strips bedded in the same material. The weather suddenly changed cold before the joints were closed, and simultaneously with the fall of a foot of snow, which has since protected all the joints except those in the gables. This structure incloses several quince and one low peach tree, near the base of which a cistern was dug five feet in diameter and eight feet deep, with an open neck two feet wide, constituting a subterranean air chamber, no water having been admitted into it.

The modifying influence of this air-chamber is regarded as important, and we have in view other experiments in connection with it, which if the weather soon becomes sufficiently mild to enable us to complete the enclosure, we shall report in the spring.

DATE.		TEMPERATURE						R'M'KS
		OUTSIDE.			INSIDE.			
		Morning.	Noon.	Evening.	Double beds and sawdust.	F'm's filled with leaves.	Single b'rds and cistern.	
1863, Dec.	18	8°	10°	— 5°	.....°	.....°	.....°	.....
	19	—12	2	.....	13	.....	.....	.....
	20	8	.....	20	20	26	.....	.....
	22	14	.....	.....	24	24	32	.....
	23	17	.....	.....	23	23	31	.....
	24	24	.....	.....	23	23	31	.....
	29	.....	.....	12	.....	.....	.....	.....
	30	— 2	.....	0	28	18	30	Snow.
	31	— 2	— 4	—21	22	0	.....	.....
	1894. Jan.	1	—23	—18	—18	12	—10	26	Clear.
2		—22	—10	— 6	12	—12	18	"
3		— 4	4	0	14	4	20	"
4		— 7	— 4	— 6	14	4	20	Clo'dy
5		—12	— 6	— 9	14	2	20	Clear.
6		—14	— 4	—12	14	— 2	20	"
7		—22	— 2	—13	12	— 4	20	"
8		—14	— 2	— 2	12	— 2	20	Hazy.
9		— 8	8	7	12	3	22	Clear.
10		— 2	10	12	14	4	24	"
11		3	14	16	19	10	26	"
12		17	30	21	18	18	28	"
13		12	24	33	18	18	28	Clo'dy
14		30	27	14	22	21	30	Clear.
15		19	16	13	23	20	30	"

The fruit-buds of the peach were generally killed by the cold of the 19th of December, and it is greatly to be feared that the extreme and protracted temperature of the past two weeks will be manifest in its disastrous effects on those of some varieties of the cherry and plum, and also on many trees and shrubs.

—It is very evident from the above, that Dr. Weed will succeed in two if not all of his enclosures, in saving his peach crop. The house with the dry cistern shows remarkable results most certainly. In such a winter as this, these protectors will be valuable if ever.

We hope that the Doctor will give us monthly reports of the condition of his trees. Ed.

From Harris's Rural Annual.

Protection to Orchards.

It is well known that peach and other fruit trees, in many sections of the country do not flourish as they did in former times. Some of the older inhabitants of the country can well remember peach trees that were thirty or more years old and still vigorous, and continued to bear annual crops of good fruit. What is true of peaches is also true in some degree, of apples, and other fruits. These trees do not survive as long, and continue fruitful as they did in the times of the early settlement of the country. Some have attributed this to an exhaustion of the soil. But this is not satisfactory, because the effect is the same when the trees are planted upon the virgin soil. Others assert that the seasons have changed, without giving any cause for such a change. It may not, perhaps, be difficult to account for this change in the durability of the orchards of the present day, from natural and known causes. During the last forty or fifty years immense tracts of forests have been removed, giving place to open, cultivated fields. This has caused the summer showers to fall less frequent, and has resulted in the drying up of many of the small streams, and exposing the entire country, more or less, to the fierce, blasting winds of winter; and, so far as these causes operate, have changed the seasons. It is no doubt the effect of these cold winds of winter upon the open and exposed country that has caused the destruction of thousands of our peach trees, and wrought serious injury to other fruits. The only partial remedy for this is to select the most exposed sheltered and favorable locations for orchard sites, and when practicable to shelter the most exposed side by planting belts of evergreen and deciduous trees. The benefit of such practice was made the most striking in an instance that came under the writer's observation during a severe winter that occurred some years since. Two extensive fruit gardens, both devoted to the various fruits and occupying adjoining enclosures; one was protected on the north-eastern to the north-western side by a belt of young native timber, and the other was open and exposed to the winds from these points. A severe cold wind occurred during the winter. In the exposed grounds the trees and vines were more or less injured, and many were killed outright—while in the other enclosure, protected by the young timber, not a tree was killed, and few sustained any injury at all.

A Word to Managers of Fairs.

We often see a premium offered for the best fifteen varieties of apples for Northern or Southern Illinois, the best early or late grape, &c., and see the one award to A. or B., and the other to P. or Q., but the public are no wiser for it; for the names of varieties are withheld and published in the volume of Transactions (if published at all) and so kept out of sight for a year or two. Now, in two years we could have a grape vine of the variety named in fruiting, and for apples and pears we could have a very good start toward fruit on these even. Peaches also might show fruit in two or at least three years from the bud. Now, gentlemen, when you award to E. P. Snow, Esq., the first premium for the best fifteen varieties of apples, including summer, fall and winter fruit, please

to give us also the names of his fruit; because the fruit has been, and can be again produced in our latitude. So at the State Fair, if you award to C. H. R. the first premium for the best late grape, why not tell us it is the "Concord," when you name the award, and so through the catalogue. The benefit derived from Fairs in this direction is small unless publicity is given to such matters of general interest.—*Rockford Register.*

Miscellaneous.

Management of Sheep in Winter.

The different ideas on the manner that sheep should be treated in winter are about as numerous as flock-masters. As a wool-grower I would say a few words on the management and treatment of sheep in winter.

As soon as your flocks fail to improve in the meadows or pastures in the fall, then commence feeding. Do not wait for snow, to feed your sheep; neither let them run, even if they are "holding their own," and not improving. To have a sheep come out well in the spring, it is necessary that they are improving in the fall or commencement of winter.

As a sheep is doing in the fall, just so they will do all winter. If they go into the yard in the fall, improving, they will continue all winter, and *vice versa*. I begin to feed grain to my sheep now once a day—say half a pint each daily, and that in the morning. When I get up in the morning and find it cool and raining a little, I take a few cornstalks and throw into their racks, and leave them after they are fed their grain until noon, unless the rain is over and the air is dry. If so, I let them out. When it rains all day I feed grain and cornstalks in the morning; hay, with a few pumpkins, at noon, and a very little grain with hay at night. I have water in the sheep barn so they can drink any time when they want it. This latter arrangement is of no small consequence in winter when sheep want to drink every hour, and only a swallow or two at a drink. If sheep have to go out in the weather on stormy days for their water, they will wait just as long as they can stand it, and then go out and drink so much that they will stand all humped up for half an hour with the cold.

It is very essential that you have good racks for your sheep—almost as much consequence as the feed. I use one that is very convenient. It is made with three scantling for the corners, two boards nailed on about ten inches or a foot apart, clear around, then three inch slats of inch stuff put on up and down, about six inches apart. In fact very much like the one in your last paper, only I have the grain trough inside the rack, and consider it quite important to have the trough fixed in such a manner that the sheep cannot crowd each other as in feeding hay in racks. Another thing, I can get into my rack and feed the grain, and not be jostled and run over by the sheep. Frequently you have your grain upset while pouring it into the trough in the other way. I feed corn unground mostly; sometimes corn meal, with a few oats mixed, to give the sheep something to make a mouthful, so they can chew it. A little sulphur once a week mixed with their corn, keeps them in a healthy con-

dition, while the salt once a fortnight keeps their appetite sharp.

Keep them warm if they lamb early, and feed a few turnips or potatoes two weeks before lambing until two weeks after. Be careful not to feed too many potatoes, so as to scour and lose your lambs; a bushel to fifty sheep a day is my rule. Be careful not to let the lambs get too much salt when young, as it is very injurious while young.

I consider good clover hay the best for sheep in winter.—*Country Gentleman.*

SETTING FENCE POSTS.—In the winter of 1838 I moved to Iowa. In drawing logs to the mill to build my first house, I had a log fifteen feet long and four feet at the stump, so large I could not draw it. I made lengths of it for fence posts, as timber was very scarce in this part of Iowa. I got it sawed to the halves. It was sawed four by four at one end and four by two at the other, which reversed one-half of the posts, bringing one-half of the posts in building my door yard fence, and let a neighbor have some for the same purpose. In ten or twelve years some of the posts rotted off in my fence. My neighbor's place changed hands, and the present owner four years ago, built a new picket fence in the place of the old one. I was present and examined the posts. About one-half of them were rotted off, and had been for some years; the other half appeared quite sound, so much so that he reset them in the new fence. The carpenter that was building the fence and I examined the posts to see the cause of the difference, and we found by the notches near the heart that the sound posts were set with the top or upper ends down.

Thus writes a correspondent of an agricultural paper. We have seen many proofs of posts lasting longer with the small ends set in the ground, the cause being, as we believe, that the pores of the wood turn the water off, like a shingled roof, when posts are thus set, while they conduct the water into the wood, like a reversed roof, when set with the butts down.—*Rural American.*

So fully have we been impressed with the value of setting posts top end down, that for the past fifteen years we have been careful to practise it. We have hundreds of posts thus set that were set during the winter of 1839, twenty-five years ago, and which are but little decayed—they are of burr oak. We prefer to cut posts in June or July, but this is not always convenient. In getting out stakes for vineyards we shall be careful to sharpen the top end, and only set this winter what we must have early in spring; leaving the remainder for summer cutting.—*Ed.*

Squeaking Boots—a Crying Nuisance.

MESSRS. EDITORS:—I wish to call your attention to what I consider a grievous annoyance, for which I suppose the bootmakers are responsible. I allude to the disturbance produced at lectures and other meetings (where silence is essential), by those who enter late with creaking boots. If they made other wearers of them as nervous as they do me when afflicted with a pair, I think some remedy would be adopted. It seems to me, however, that

the gentlemen who come late into such meetings are entirely unconscious of the effect they are producing. Where the voice of the speaker is not very powerful, or he does not keep an even tone, and the closest attention is required from the audience, a creaking pair of boots often causes the loss of a statement or a link of an argument essential to the right understanding of the whole subject on hand. I want you to urge the adoption of a remedy on your readers. Bootmakers have told me that French chalk, or something like it, put between the soles will prevent the evil. The last bootmaker from whom I purchased a pair having assured me positively that they would not annoy me in that way, agreed that if they did he would take the soles apart and apply the corrective. But when I came to wear them I found they screeched horribly; though as it was in a distant city that I bought them I could not call upon the seller to fulfill his agreement; so I determined to try some remedy myself, however desperate, to cure them. I had frequently tried saturating the soles with common oils, but though this mitigated the evil it did not cure it. It occurred to me that boiled linseed oil might do better. I accordingly applied it to the soles keeping them quite hot during the process to enable them to absorb the more. I did not know but that the hot oil might be ruinous to the boots; but though I could not afford to throw away such an article, I was determined to sacrifice the boots rather than to be so sadly troubled with their noise. I saturated them accordingly with as much oil as they would absorb, and am happy to say that my experiment appears to have succeeded. I have worn them now for a number of weeks and they have been as quiet as the best behaved boots ever made. I can march up the broad aisle of a church without disturbing one serious listener, or enter any other meeting as noiselessly as a lady in velvet slippers, and as far as I can see, the boots are none the worse for the application. H. W.

[As this correspondent has provided his own remedy, we cannot do better than circulate it for the benefit of others.—*Eds. Scientific American.*]

The Peat Beds of Holland.

The peat beds play a most important part in the domestic economy of Holland. There is no coal in Holland—none nearer than the great carboniferous basin at Liege. By way of substitute, Nature has provided peat. Enormous beds of this deposit lie in the provinces of Friesland, Groningen, Drenthe, and Overijssel. The land there quivers perpetually, and the inhabitants say *Het land leeft*—the land is alive. Peat was burnt in Holland long before coal was burnt in England. The consumption increased 50 per cent. between the years 1834 and 1852, at which latter date it was 33,943,630 tons. The peat beds are of two kinds—high beds, *hooge veenen*, and low beds, *lage veenen*. Assen, the chief town of Drenthe, stands in the middle of an old peat bed. The fields and gardens by their smiling aspect would never betray their origin. In the high lands peat is supposed to have been formed by the decay of vegetable life, chiefly that of heath and moss, on the surface of the ground, which forms a mould that increases year by year until it has undermined the trees, and having caused their fall, gradually covers them over with a yearly-increasing deposit. Ages afterwards the

trunks are found whole several feet below the surface of the bed. The forests protected the growth of peat and were destroyed by it.

In the low beds, peat is formed by the decay of aquatic plants under water, which, dying, fall to the bottom, and form layer upon layer. These are often floating upon the surface of the water. Sometimes, after a long drouth, in which the peat is left stranded on the bottom of the marsh, the plants take root and prevent the bed from rising when the marsh becomes again full of water. At other times the beds are carried away by the force of the wind, and lawsuits have arisen, in which the plaintiff sought to recover possession of an estate which he had floated away, with all the owner's live stock on it, and stranded itself within the boundaries of a neighbor's property. The Romans were greatly alarmed by the floating forests in the Ruyderzee, which, more formidable than Birnam Woods to Macbeth, came sailing towards them, and threatened their galleys with destruction. The modern Dutchman, less superstitious, but not less anxious to prevent the land from playing truant, is accustomed to fasten these fugitive estates by ropes attached to stakes fixed in the more stable earth.

The working of the peat beds gives employment to a large number of hands. The first step is to drain the bed by digging trenches some 24 feet apart, and from three to four feet deep, lined with an earth wall to prevent the peat from falling in. These trenches are gradually deepened, until some eight years from the commencement of operations the peat is fit to be dug. One great danger in working these beds is that of setting them on fire. M. Esquiro, from whose most interesting description we have borrowed some of the foregoing facts, mentions a case in which the fire lasted twelve days and the only means by which it could be stopped was to dig a trench round the burning field.

The chief of the low beds is at Wateringen, near the Hague.

As the working of these beds necessarily causes the formation of a lake, the government lays great restriction upon this occupation. When permission is given, the proprietor skims off the ground, which consists of valuable agricultural clay land, and carefully removes it to another portion of the field. The clay is usually performed in the winter. In the spring, workmen clad in long water-proof boots descend into the water, cut the peat beneath the water, and then, guided entirely by their eye, seize the sods, and pitch them into a barge. This barge is emptied some six times a day into a wooden trough 12 feet square and two feet deep, where the peat is trodden down by human feet until it is kneaded into dough—a process which by force of contrast as well as of similarity recalls the grape pressing of Italy. The peat is afterwards taken out, arranged in blocks, covered with planks, and allowed to harden. It is then carried to the various towns in barges, the conductors of which are forbidden to smoke.

The peat of the low beds is preferred to that of the high. To put against this, the working of the low peat beds leaves a lake, which the high beds do not.

Latterly, a daring speculator bought up these lakes at a low price, dyked them, drained them, and obtained as a reward of his enterprise some

most valuable agricultural land, on which he grew most luxuriant crops.

Peat is used in manufactories, breweries and limekilns as well as in private houses. Being bulky, it is subject to pressure before carriage, and this compressed peat is converted into charcoal.

Peat forms the basis in the manufacture of paper ink, varnish, and animal black. In marshy countries it is used as the foundation of houses. It swells under water, and centuries after, when the house is pulled down, it is as good as ever, and is then used for fuel.

SPENDER,

In Trans of Bath and West of Eng. Society.

From the Scottish Farmer.

On the Immutability of Species.

We often read of extraordinary things even in newspapers. There is one strange tale that has frequently been repeated, and which has lately been referred to in our columns. It is, that certain people persuade themselves that the seed wheat which they have sown, has produced a crop of oats, or that barley sown has yielded a return of wheat, or vice versa. Wheat is a species of a group of grass like plants, termed *Triticum*; oats is a species termed *Avena*, and barley a species termed *Hordeum*. The group to which each of these belongs, is a genus in botanical arrangement, and each group or genus usually consist of several, (indeed, in the cases referred to, of many species.) Again, we have the group of *Daucus* the carrot, of *Beta* the beet, and *Pastinaca* the parsnip, which although not so long in a cultivated state as the wheat, barley, or oat, have been sufficiently long under the observation of man to convince him that whatever change in improvement they may have undergone since being reclaimed from a state of savage nature, neither of them have shown the least disposition to change into the state of the other. The thing is physically impossible. Nor can an instance be stated where any of the wild species of *Triticum*—say the common couch-grass, *Triticum repens* of our fields, or the sea-wheat grass of our sea coasts *Triticum junceum*—have made any advance towards being identified with the *Triticum aestivum* or *T. hybernum*, our summer or winter cultivated wheats; or that the meadow, sea-side, or wall barleys, the only species indigenous to Britain, have changed to the useful state of those species which have been cultivated from the earliest ages. The same rule is applicable to the genus *Avena*, or oat family, which is even much more numerous. Oats will remain oats, barley barley, wheat wheat to the end of the time, as distinct in themselves as different species, as they have continued to be from the beginning. That the one should change into the other is just as possible as that either should change into an onion or a potatoe. It would be a waste of time to argue against the belief that such could by possibility take place, or even to confute what many believe, but which is equally untrue, that wheat is derived from rye. It is quite time that such absurd notions should be dispelled. These are popular views and just as certain popular errors. Those who have studied the natural history of living forms carefully, whether in the animal or vegetable kingdoms, are quite satisfied as to the truth of the axiom, "that one species never passes into another

species." All the support which can be brought in favor of such changes having taken place, is merely traditional, and no more worthy of belief than the traditions descending from heathen mythology, such as that Lombardy poplars are the metamorphosed sisters of Phaeton; or that the garden white lily sprang from the youth Narcissus as he pined away for his own image; or that the Hyacinth sprang from the blood of a youth killed by Zephyrus with the blow of a quoit.

The "Wine Plant" Once More.

Although our opinions on this subject were quite distinctly indicated in the *Co. Gent.* of Nov. 5, 1863, p. 304 inquiries from new subscribers necessitate another reference to it.

A reader in Kane county, Illinois, forwards us a most extravagant circular issued by parties having for sale what they style in large type

WINE PLANTS

FOR MAKING

AMERICAN SHERRY!

What they have is simply the *ordinary Rhubarb* or "*Pie Plant*" of the kitchen garden. A passable domestic beverage can be made from it, of which a few bottles or gallons might perhaps be sold or exchanged with one's neighbors, but it is not a wine which can ever be sold in any quantity, and such calculations as the following extract contains are the *sheerest humbug*:

"This plant for making wine, is creating quite a sensation in this vicinity, from the fact that such large profits are derived from the small amount of capital invested. The product of a single acre the first year, is from 3,500 to 6,000 gallons of wine. This readily brings at one year old \$1.50 to \$2.00 per gallon. The increase of the root at the same time is at least \$1,500 to \$2,000. This may seem visionary and extravagant, but nevertheless, it is the actual product, as every person will testify who has seen it grown and made the wine, also hundreds who are not engaged in the business will testify."

"In the first place, we do not believe that an acre of Rhubarb roots the first year could be made to yield anything like this amount of so-called wine; and if it did, we are entirely confident that, with all the labor and care possible expended in securing a pleasant beverage, it would still be quite a valueless commodity unless in so far as the maker and his family can drink it, or sell it to those who have the roots to palm off and who might desire it to aid in promoting this object.

As to the quality of the "Rhubarb wine," we have tested various samples, but none that approach in quality a good currant wine. We do not say that it is impossible to make it as good as currant wine, but that the latter is certainly quite as likely ever to become a merchantable article on a scale of any extent.

No reader of an agricultural paper should be imposed upon by these specious circulars. For farmers who do not read an agricultural paper, we have no sympathy whatever, and no doubt a thriving trade in the plants will be done among them.—*Country Gent.*

—In the above we have the best possible evidence that the fools are not all dead. Can it be

possible that an intelligent reader of any agricultural paper can be swindled with such barefaced falsehoods as the above. We know that hundreds are thus taken in, but we have not heard that any of the subscribers of the FARMER are among the number. We hope the schoolmaster may be permitted to visit the land before the fool killer makes his appearance.

Ed.

The New Staple—Coal oil.

Our fossils are making the nation rich. It is surprising how suddenly a new discovery is made to take rank as an important staple. No other country in the world has been so ripe for such extraordinary transitions. The Romans knew that England abounded in tin, but centuries elapsed before it rose to the dignity of a commercial staple, and it was exactly so with her iron. North America seems to be in all respects an exceptional region. Coal and iron rose here, within a single lifetime, into national importance. The gold of California became a gigantic staple within a twelvemonth. The last of these extraordinary eccentricities is petroleum. Four years have been sufficient to elevate it from the worthless condition of a floating pellicle on the surface of an obscure creek to the rank of a prime staple, of which the world cannot get enough. There is nothing in the history of industrial development to equal the progress it has made. When the country first heard that an adventurer in Western Pennsylvania had dug a well from which gushed out a thousand gallons of oil daily, the multitudes refused to believe. Many of those who did believe were sure the flow would quickly fall off—it was impossible such luck should last. It not only did last, but has been matched by hundreds of others.

In this country development is in proportion to the crowd that can be collected. As in the gold mines, so in the oil region. The latter was already within a day's ride of dense population, who, amazed at the discovery almost at their own door, flocked in to see, to be satisfied, and to bore wells. Outsiders, a thousand miles away, became similarly affected. Presently Oil City was founded, and population flowed in as rapidly as the oil flowed out. Thousands took to boring; it was, in fact, a community of borers. The rush was in a small way equal to California itself. Within a single year petroleum became an important staple. Its hiding place in the caverns beneath us has been penetrated, only to prove that the supply is inexhaustible. It has already founded new cities and given prodigious vitality to old ones—even quickening the trade of such as this, and built a railroad twenty-seven miles in length, over which, in the fourteen months ending with 1863, there were carried 430,684 barrels of oil, 22,727 tons of freight, and within thirteen of 60,000 passengers. The receipts were \$384,705, and the dividend 25 per cent. All these wonders have been wrought within four years in a wild region, into which strangers never penetrated, where the land was of little agricultural value, and where population had never gathered.

Up to 1863 the progress of the petroleum trade astonished everybody. But that of the past year has exceeded all expectation. It is evident the wells have no bottom. What the product for the

year has been we cannot say. It may be that in the excitement of a highly prosperous business no accurate account has been kept. But the Custom-House figures give same indication. Petroleum is exported to every country in the world. In 1861 we shipped 1,112,476 gallons; in 1862 it rose to 10,887,701 gallons, and in 1863 it reached the extraordinary quantity of 28,000,000. Of this total, 19,544,604 gallons were shipped from this port. In addition to this foreign export the home demand is enormous. Though the whole business is strictly a new one, yet it has already assumed shape and stability. Ships for conveying it to England are constructed oil tight, and the barrels emptied directly into the hold, thus carrying it in bulk. The export of last year employed what was equal to 252 ships of 1,000 tons each, and was worth near \$15,000,000 if refined, or about 12,000,000 if crude. The export for this year is estimated at 40,000,000 gallons.

Refined coal oil is now as colorless as water, and quite as free from smell. It is burned in lamps in tens of thousands of families, and fortunes have been realized by the inventors of lamps and the manufacturers of shades and chimneys. The consumption for illuminating purposes is only just begun. As the pleasantest and cheapest light, next to gas, it is destined to supercede all but the latter. Like iron, gold and coal, no one can fix the limit of consumption. It can only be arrested by failure of the wells to yield. Of this geologists say there is little probability. The petroleum wells of Burmah have yielded uninterrupted supplies for thousands of years. How long our coal mines may last has been frequently calculated, but no calculator has ventured to predict that they were likely to give out. The iron and gold they give up as inexhaustible. If they abandon petroleum to the same extended term it may justly claim to take rank beside them as an equally enduring staple.—*N. Y. Trib.*

Tobacco of California.

The value of the tobacco used, in California, would astonish any one that would give time to make the estimate, and yet now that the cultivation of it has commenced the growers have great difficulty in inducing manufacturers to purchase our home raised article. This is a very great error, and to show how the thing is brought about we quote from a grower's letter to us—a curious idea but a good one. The writer says:

"I have raised three acres of tobacco this year and it has done well. I have some samples put up to bring down to you, but was not able to come last week; it is a good article, and fine as can be raised in the East. What is the reason the merchants will not buy anything raised in California, if they can help it? They ask 50c $\text{\textcircled{P}}$ lb for tobacco in the leaf, and it is black and musty, and some of it rotten at that, but *California tobacco sent to New York and then shipped back is considered an A No. 1, article.*"

Now this short letter lets the "cat out of the bag," here the merchant or speculators combine to depress the value of native tobaccos, then buy it up for shipping to New York, to be re-shipped to California, invoiced as "genuine Kentucky Leaf," "Maryland" or "Connecticut," and it sells readily for 50c $\text{\textcircled{P}}$ lb. Suppose large growers should try this experiment themselves? We think it would pay!—*CAL. FARMER.*

Corn Planter and Roller.

40,822.—Corn Planter.—Wm. Craig, Urbana, Ill.

I claim first the roller C, constructed of sections a' a' a' a* which are provided with flanges, b*, as shown for the purpose specified.

Second, The button L, attached to the back part of the draught pole B, and arranged as shown for the purpose of keeping the front part of the frame A elevated and the shares F above the surface of the earth when required.

Third, Arranging or placing the driver's seat M on supports, N, the upper parts of which are horizontal and are fitted in slots made longitudinally in the ends of the seat, M, to admit of the adjustment of the latter as set forth.

This invention relates to a new and improved seed-planting device by which seed may be planted either in drills or hills and in check rows, and the seed-distributing device operated either automatically or by hand, and the seed also properly covered and the earth rolled so that the latter will be firmly compacted over the seeds and the clods of earth crushed or pulverized, the device also, by a simple manipulation being capable of having its furrow shares raised out of and free from the earth, as is necessary in turning at the ends of rows, transporting the device from place to place and in rolling land.—*Scientific American*,

The above described machine, or a similar contrivance, must be had for the large corn planters, and it will stand the makers of corn planters in hand to look after it. We not only predict but know that a planter attached to an iron roller, whereby the corn field can be planted and rolled at the same operation, will at once revolutionize the present system of marking off, planting and harrowing. Three years of success with planting in drills and rolling, have brought these facts so strongly before us that we know that it must and will soon be adopted. Who will put the machine into the field and make himself famous thereby?—Ed.

COAL ASHES AND CHERRY TREES.—An Indiana correspondent of the Dollar Newspaper says: "I recollect well, when a boy, of carrying the coal ashes from the grate, and piling them round a little cherry tree, which was known by all the family as the 'little orphan,' on account of its sprouting from the roots of an old tree which died, and the peculiar hard time it had in reaching the stature of even a bush. The summer after the coal ashes were deposited around its base, it put forth vigorously, and in three years was quite a thrifty tree, heavily laden with luscious fruit. My father seeing the good result of the ashes, a wagon load was thrown around the base of each tree on the farm, and the effect was astonishing. Old trees that were fast decaying were resuscitated, and sent forth new branches, and bore fruit abundantly."

A friend sends us the above. We suppose that the same quantity of sand or gravel would have been equally valuable. We see it stated that the lack or dust from coal is an excellent manure for

plants, which is doubtless true, as it will not only supply carbon, but absorbs heat and ammonia both of which are valuable to plants.—Ed.

THE WEATHER.—On Monday last, and for a few days previous, the weather had been very like early spring, and so moderate that skating parks were deserted, and for a few hours overcoats laid aside. About three o'clock Monday afternoon a cold, bleak wind sprung up from the northwest, and the temperature rapidly descended the scale, so that during the night the mercury indicated 12 degrees below zero; nor has it since then at any one time, we believe, been more than 20 degrees above zero. On Tuesday night it was down to 11 below, and on Wednesday night to 8 below.

The Skating Parks have advertised carnivals; and the street cars have been well patronized by men and maidens with their skating accoutrements; steamboatmen and sailors, who had hoped for an early opening of navigation, as they saw the river almost free from ice, now find it firmly closed over again; dealers in fuel take fresh courage, and the price of fuel as usual goes up as the mercury goes down; the poor are more earnest and persistent in their appeals for food and fuel, and all complain of the unexpected "cold snap." However, during yesterday the weather moderated considerable, and last evening the thermometer ranged 5 deg. above zero, and still later had an upward tendency. The weather-wise predict a "January thaw." So mote it be!—*Chi. Tribune 18th.*

The weather at this point was also cold and the change sudden. At 9 o'clock p. m. on Monday it was 30 deg. above, and at 7 a. m. Tuesday, 4 deg. below; the next morning at 20 deg. below. The change on Monday night was therefore 34 deg. in ten hours. Not anticipating such a change of base our greenhouse suffered rather severely, on the east side exposed to the wind. We also fear that it may have a bad effect on many trees and plants exposed to the sharp winds.

SORGO SUGAR.—The *Washington Republican* says: "An experiment was made in the Department of Agriculture a day or two since, before a large number of persons, clearly demonstrating the practicability of every man in the North making his own sugar. A gentleman from Nebraska, Mr. J. F. Riggs, who is about taking out a patent for his process, was the operator. From sorgo sirup sent to the Department for exhibition, in the course of a few moments, he produced a clean and pure sugar equal in all respects to the best coffee sugar, the residue of the sirup proving to be an excellently flavored article, strongly resembling amber or golden sirup of the shops, and entirely free from sorgo taste."—*N. Y. Trib.*

We have seen the above going the rounds of the papers, and nail it as erroneous. No sugar has been made in the mode described, but from what is called *mush*, that is granulated sirup, which was pressed several times in a coarse cloth, after stirring some chemical in the mush. The residue of the golden sirup is strongly made up of bosh.—Ed.

Cotton in Illinois.

It is stated that Messrs. Fenton & Co., of this city, intend to plant 300 acres of cotton this season. The firm is satisfied from last year's experience that cotton can be made a profitable crop in Southern Illinois, and are, therefore, preparing to enter into the business upon an extensive scale. At their gin in this county they have ginned and pressed twenty bales, and have at least ten more to press.—*Cairo Cor. Chi. Trib.*

In the last number of the FARMER we stated what was doing in this direction at Cobden, 42 miles north of Cairo, and are now pleased to learn of further good news in this staple. There is plenty of seed to be had at the gins in the south part of the State and at St. Louis. We have no fears of the result; cotton and sweet potatoes will hereafter be grown side by side in Egypt.

NUMBER OF SHEEP IN ILLINOIS.—In looking over Randall's Practical Shepherd, we discover in the chapter on Prairie Sheep Husbandry, he gives Illinois credit for only 50,000 sheep. On turning to the table of comparison by States in an article on the condition and prospects of Sheep Husbandry in the Com'r of Agriculture's report, probably taken from the census of 1860, we find that Illinois had in 1860, 775,320 sheep. With that number in 1860, our State must now possess nearly or quite 1,000,000 head.

We suppose Sangamon county must have from 75,000 to 100,000, and there are a number of counties which have as many as Mr. Randall has stated to be the number owned by the entire State. We have one man in the State who is wintering nine thousand.—*Prairie Farmer.*

CURRENTS—Dried currents of commerce, as they are miscalled, are in reality a grape, and free from stones or pits; they come from the Isthmus of Corinth and several places in the Indian Archipelago. A small Spanish current is sometimes sold in their stead. It is the island of Zante which furnishes the largest amount of these currents, and their cultivation is materially lessening, as the jealousy of the Ottomans does not allow large vessels to enter the gulf for their purchase. These currents grow on vines like grapes; the leaves are somewhat the same figure, and the grapes similar; they are gathered in August, and dried on the ground; when kegged they are trodden down closely with the feet. Zante Island produced enough to load five or six large vassels; Cephalonia three or four, and other islands one.—*Ex.*

A FLAX CROP.—The Peoria (Illinois) Transcript mentions the purchase of a flax-breaking machine by Mr. McKinstry, of Delaware Prairie and says he this year grew one hundred acres. His first attempt in this direction was made last year, when he put in twelve acres as an experiment. This netted him \$50 per acre from the seed, all of which he sold in his neighborhood. Of the one hundred acres of it sown this year, but seventy or eighty will do to break, and from this at the present prices he thinks he will realize about \$3,000.

New Way to Fatten Hogs.

FARMERS PLANT SWEET CORN.—During our visit at the East we were asked to look at some fattening hogs in the sty of Dr. Caleb Plaistridge, of Lebanon, N. H. They are very fine ones, but not as good we were told as the doctor usually raises. His system is this: for twenty years past he has planted one-fourth acre of sweet corn, and killed three hogs. The hogs have a good large, airy sty, with feeding trough so arranged that they cannot interfere with each other at feeding time, and free access to a large yard, through which runs a spring of clear water. When his sweet corn is large enough to roast, he commences feeding it, stalk and all, in the yard, giving them all the swill they will eat. This he continues until they refuse to eat the stalks, after which the ballance of the corn is fed in the ear, and the fattening process finished with corn meal. During the whole twenty years he has failed but twice of killing hogs of over five hundred pounds weight each, each and he gives credit for most of the weight to the sweet corn. He says properly fed it adds at least two hundred pounds to each of his hogs. Until the frost kills it, they will eat the sweet corn stalks and all.—*Pontiac Jacksonian.*

The Weather.

The extreme cold of the first half of January has been followed through Wisconsin and Minnesota by numerous and heavy snow-storms, but in the greater portion of Iowa, Illinois and Indiana, the weather for three or four weeks has been very fine, frosty at night most of the time, with mild but not unseasonably warm days, and with but few storms of wind or rain; the consequent activity of business in these last named States has been gratifying to all commercial interests. Monday night the weather here changed suddenly from mild to very cold and windy, but without indications of long continued severity.—*Wells Commercial.*

A FEW STATISTICS OF THE REAPER TRADE.—But few persons not actually engaged in the enterprise have any very definite idea of the immense proportions the business of manufacturing reapers and mowers is assuming in this country. We have reliable information that there were made for the trade of 1862, 33,000 of these machines; for that of 1863 something over 40,000, and the business of the present year upwards of 70,000 will be made. Mark the wonderful increase since the war began. Out of the 70,000 between 14,000 and 15,000 will be manufactured in the State of Illinois.

Seventy thousand machines at an average of \$130.00 each, (combined machines selling the ensuing season at \$150.00 to \$160.00 or even higher, and mowers from \$105.00 to \$140.00,) and we have the enormous amount of \$9,100,000 paid by the agriculturists of the North in a single season for a single class of implements. Probably the repairs on machines, old and new, will swell the amount to nearly \$11,000,000. Can any country in the world equal or even approach these figures?—*Ex.*

It costs a great deal of labor, wear and tear, to produce and haul to market a load of wheat or corn, and it brings at best only from thirty to forty

dollars, even at the present "war prices" but a load of butter equal in weight to forty bushels of wheat (2400 lbs.) would bring between four and five hundred dollars; or the same amount of cheese would bring nearly three hundred dollars. We have again and again alluded to this subject, and we would urge all who possibly can to arrange their fields and pastures with a view to dairying some.

In dairying you have your harvest every day, night and morning, you can do your labor in the cool of the day, and you are sure of a good article to obtain a good price, war or no war; folks will eat, and every body almost, likes to have his bread buttered, "*to make it go down easy like.*"

We have kept dairy for a number of years and should keep one now were we living on a farm, and we know whereof we affirm. There is no more profitable branch of farming, one year with another, excepting perhaps the keeping of sheep, than to keep a dairy of cows for the manufacture of butter and cheese.—*Rockford Register*

Home-Brewed Ale.

G. Burton, in the *Rural New Yorker*, gives his method of making home brewed ale as follows.—"The art of brewing is very easy to be understood, for it is exactly similar to the process of making tea. Put a handful of malt into a tea-pot; then fill it with water—the first time rather under boiling heat. After it has stood some time, pour off the liquor just as you would tea, and fill up the pot again with boiling water. In a similar manner pour that off, and so go on filling up and pouring off till the malt in the pot is tasteless, which will be the case when all its virtue is extracted. The liquor or malt tea must then be boiled with a few hops in it, and when it becomes cool enough—that is about blood heat—add a little yeast to ferment it, and the thing is done. This is the whole art and process of brewing; and to brew a large quantity requires the same mode of proceeding as it would to make a tea breakfast for a regiment of soldiers. A peck of malt and four ounces of hops will produce ten quarts of ale, and of a better quality than can usually be purchased."

VICK'S ILLUSTRATED CATALOGUE OF SEEDS.—This is a pamphlet of forty-eight pages, containing not only a list of seeds, but pretty full instructions for their culture, in fact a valuable work for the farm and vegetable garden.

"I take pleasure in offering to the lovers of beautiful flowers and choice vegetables my New Illustrated Seed Catalogue for 1864, which for beauty and real value, I think, has no equal. It will be found to contain not only a complete list of the leading floral treasures of the world, with full and accurate descriptions, but such plain yet complete directions for culture as will enable all who heed them to avoid the failures so common yet so vexatious to those who love flowers but lack experience in their culture. My Catalogue for the present season is a complete Rural Directory or Guide for the Flower Garden, and may be consulted with profit by those who wish to select seeds, or learn how to treat them after they are obtained.

The habits of the different varieties, the best location, soil, etc., distance apart at which the plant should be grown, best method of sowing the seed, transplanting, and all other necessary directions, are given in full with each variety, so that the most inexperienced amateur need not fail. In addition to this, I have given fine, life-like engravings of many of the most popular and beautiful flowers, which, with the descriptions, cannot fail to give a correct idea of their character."

The above will give an idea of the value of the work. Send for a catalogue. We have had flower seeds of Mr. Vick, and have always found them of superior quality.

A New Grafting Wax.

Several of our friends who have tried the following composition as a grafting wax, have been much pleased with it. We see it also recommended in some of the horticultural journals—to wit: One pound of rosin, five ounces 95 per cent. alcohol, one ounce beef tallow, one table spoon of spirits of turpentine.

Melt the rosin over a slow fire, add the beef tallow, and stir with a perfectly dry stick or piece of wire. When somewhat cooled add the turpentine, and last, the alcohol in small quantities, stirring the mass constantly. Should the alcohol cause it to lump, warm again until it melts. Keep in a bottle. Lay it on in a very thin coat with a brush. In a room of moderate temperature, the wax should be of the consistence of molasses. Should it prove thicker, thin it down with alcohol. It is always ready for use, is never affected by heat or cold, and heals up wounds hermetically.—*German town Telegraph.*

Ohio Pomological Society.

This society held its winter meeting at Cleveland last month. Grapes occupied considerable attention. The Clinton was returned in the list, altho' a strong attempt was made to throw it out. Cayahoga white grape was said to mildew badly when young. Delaware was highly commended. Concord still held its position at the head of the list for the million. F. R. Elliott stated that in the county in which Cleveland is located there were 700 acres in vineyard, 400 of which was in bearing last season.

Making Cider.

We have seen several samples of cider in which bi-sulphate of lime was used. It makes the cider very clear, but an excess spoils the cider taste. Ten ounces is the rule for a barrel, but it is probably three or four times too much. The making of cider is becoming annually of more importance, and a good article is desirable.

These cheap cider mills make a great waste of the raw material, as they are not capable of pressing out more than half the juice. One mill in a neighborhood costing four or five hundred dollars, buildings included, would be worth more to the orchardist than twice that amount in cheap mills.

Editor's Table.

BAKER & PHILLIPS - - - PUBLISHERS.

M. L. DUNLAP, Editor.

SPRINGFIELD, ILLINOIS, FEBRUARY, 1864.

THE first month of the year has been one of unusual severity, and long to be remembered.

* * * * *

"Twas I, the spirit of the storm.

He waved his sceptre north away,
The arctic ring was rift asunder,
And through the heavens the startling bray
Burst louder than the loudest thunder.

The feathery clouds, condensed and furled,
In columns swept the quaking glen;
Destruction down the gale was hurled,
O'er bleating flocks and wandering men."

The destruction of sheep, of hogs and cattle has called us back to the days of the Ettrick Shepherd, when the *wraith* swept the best flocks from the hills of Scotland.

One of our large flock masters, counted two hundred and fifty dead sheep on New Year's day. The delayed railroad trains turned out their thousands of dead hogs—frozen stiff and stark during the storm, while in the timber portion of the State, where the store hogs usually run out in the woodland, the frost king counted his victims by scores and hundreds. These may be called lessons in ninth it, calling for more barns, more sheds and more shelter of all kinds.

Our shelter belts though young have proven valuable in this trying time. They hold the snow and prevent the drifts from forming, in and about the sheds.

Such a visitation of cold did not come for the first time, nor will it be the last. That it swept farther south is only from the fact, that the clearing up of the forests permitted its onward unobstructed sweep. Elsewhere we give pretty full accounts of the damage to trees, but the full summing up must be delayed to May, when the damage in all its sad significance will have become fully apparent.

STATE HORTICULTURAL SOCIETY.—A large amount of the space for January was occupied with a report of the winter meeting. With the exception of the essays, it will be found to contain all of much value that will be found in the transactions. We have not heard what progress has been made towards printing them.

THE WHITE BARK LOUSE.—A. S. Coe, of Port

Byron, sends us specimens of this bark louse. We have never seen it in our grounds, nor do we think it will prove troublesome. It is without doubt a native and identical or similar to that described by Dalman in the "Transactions of the Royal Academy of Sciences of Stockholm," under the name of *Coccus Cryptogamus*. A full account of it is given by Harris, in his "Insects Injurious to Vegetation."

SMITH'S CIDER AND WILLOW TWIG.—A. S. Coe of Port Byron says in a recent letter, "If you are not troubled with the *blight*, you will find Smith's Cider, all you desire for a market apple."

"Although Willow Twig is 2d and perhaps 3d rate as a dessert fruit, I find it by far the most profitable apple for market that I have as yet grown."

Mr. Coe had four thousand bushels of apples last year, and ought to know something of varieties. Along the Mississippi, Smith's Cider appears liable to blight, but on the east side and interior of the State, we have not observed this tendency, and therefore shall plant it largely. The Willow Twig is gaining friends where known. The tree is hardy, an abundant bearer, the apple a good keeper and in use when the market is rather bare of fruit. The tree is a slow and feeble grower and not popular with nurserymen on this account. How long tree planters will bow to the behests of nurserymen we know not, but the day must come when nurserymen will be compelled to grow those sorts that are really valuable, or planters will set out seedlings and graft to suit themselves.

TREES AND TREE PLANTING.—We are in receipt of a package of pamphlets with the above title, sent out by order of the State Horticultural Society, by J. Periam, Thornton Station, H. D.; Emery of the Prairie Farmer, and O. B. Galusha, of Lisbon, Kendall county, who will supply copies to all applicants inclosing a two cent stamp, or we can send them on the same terms.

The pamphlet contains much valuable information. As it can be had at little cost, we do not propose to republish it.

DOOLITTLE BLACK CAP RASPBERRY.—Among the small fruits the Black Cap deservedly holds a high place. Last year, Mr. S. Hood of Springfield, this State, gathered from a half acre 1459 quarts, for which he received \$182 85; and he says the prospect the coming season is for a third larger crop. The price per quart was not large, being only

twelve and a half cents, or four and a half dollars a bushel. Reducing the quarts to bushels—36 wine quarts to a bushel—and we have eighty bushels to the acre. Allowing two and a half cents a quart for picking, we have \$292 per acre for the crop.

To set an acre of plants and cultivate them two years will not cost forty dollars.

In five years we will wager, that the Black Cap raspberry will be more abundant than the currant in our markets.

IMPROVED BLACKBERRY.—Our new blackberry appears to have stood the winter in good condition; of course we cannot yet decide as to the crop, but think it is not yet injured. Mr. Joseph Barber of Richview writes us that the wild blackberry in his section are all killed. If this blackberry stands the past winter unharmed we shall send it out with the utmost confidence in its value as a hardy plant.

GARDEN SEEDS.—We observe that S. Wilbur of Momence the garden seed man, is out with a fine stock of seeds. Fortunately for the country the drouth was less severe on the upper Kankakee than in many other parts of the State.

Those buying seeds at Springfield and other parts of Central Illinois will do well to note the label, if they want good home grown seeds.

SORGO CULTURE.—Next month we intend to devote a large space to the above subject, including variety, culture and manufacture.

WROUGHT IRON WAGONS.—In returning from the Fair grounds to Decatur *solitaire*, we were overtaken by Mr. John Kirkham of Peoria, driving his iron wagon and who kindly invited us to ride. The whole of the running gears of the wagon are of wrought iron except the hubs which are cast.

This kind of wagon would be valuable to those farmers who are in the habit of letting wagons stand out in the rain and sun, for the spokes and felloes will not warp or rot like oak. This wagon runs light and we have a very favorable opinion of it. The cost is more than one of part wood, say about \$110. They must prove durable.

THE DANA APPLE.—In a previous number, we made mention of this apple. Since then we have a letter from J. H. Stewart of Quincy, in which he says:

"The Dana, is an apple which we have cultivated for more than fifteen years. It was named for the man with whom it originated in some part of

Ohio. The apple is a little above medium size, round and very regular in form, stem long and slender, inserted in an even smooth cavity; color yellow ground, very much striped and splashed with pale red, flesh white, with a pleasant subacid flavor. It hangs on the tree well, becoming quite ripe before it drops. The tree makes a very straight upright growth, is remarkably hardy, having stood all the hard winter without any damages—bears regular and abundant crops. In season it follows Red June and Early Harvest—quality of fruit 2d rate."

Evans, in his catalogue of native fruits, calls it an Illinois seedling, but it will be seen by the above that it should be credited to Ohio.

ORCHARDING IN MISSOURI.—Col. A. Bainbridge, formerly of Cobden in this State, but now of De Soto, some forty miles southwest of St. Louis, writes us that he has 9,500 peach, apple, pear, apricot and cherry trees and 600 grape vines. Of these trees 3,000 are apple, set two years since, some of which fruited last season.

HUTCHISON CIDER MILL.—This mill is having a great run, and is doubtless valuable to make cider in a small way for daily use, but for a mill to put up cider on a large scale is worthless, as, not one half the cider can be pressed from the pomace. Many people who have large orchards have been induced to purchase it, but find it of no value in that connection.

MISSOURI AND ILLINOIS HORTICULTURAL IMPORTING ASSOCIATION.—Its object is to meet a want long felt by nurserymen in the West.

ARTICLE 1.—This Society shall be known as the "Missouri and Illinois Horticultural Importing Association."

ART. 2.—Its object shall be the importation of such Fruit Trees, Ornamental Trees, Plants, Stocks, Bulbs, &c., as may be ordered by its members.

ART. 3.—Any person may become a member by the payment of one dollar, and signing this Constitution.

ART. 4.—The officers shall consist of a President, Treasurer and Secretary, who, in connection with two other members, to be elected by the Society, shall constitute an Executive Board, charged with the direction and control of the affairs of the Society, subject to its instructions; they shall hold their office one year, and until their successors are chosen.

ART. 5.—The society shall hold its annual meetings on the Thursday after the second Tuesday in January, and the Society or the Executive Board may be called together at any time by the President.

ART. 6.—This constitution may be amended at any meeting, by a two-thirds vote of the members present.

The following gentlemen then paid their fee, and became members:

E. S. Hull, Alton, Ill.; C. W. Spaulding, St. Louis, Mo.; N. J. Colman, St. Louis; Jonathan Huggins, Woodburn, Ill.; James E. Starr, Elsah, Ill.; L. D. Votian, Eureka, Mo.; John A. Pettingill, Bunker Hill, Ill.; B. F. Edwards, St. Louis; Geo. Husmann, Hermann, Mo.; John Henwood, St. Louis; Carew Sanders, Carondelet, Mo.; W. C. Flagg, Alton, Ill.; H. Claggett, St. Louis; J. H. Tice, St. Louis; J. J. Kelley, Rock Hill, Mo.; H. T. Mudd, St. Louis.

WILBER'S MAP OF ILLINOIS.—We are just in receipt of this map, not the one at the State Fair but an improved edition, containing many new features. The map is 36 by 48 inches, and mounted on rollers.

It is the most valuable map of the State by far, that has been presented to the public. We have seen no State map that compares with it. First, we have all the counties, townships, cities, villages, railroads with their stations, streams, etc., that belong to an ordinary map. Then comes the coloring that shows the different geological formations and coal fields, the rain districts, showing the annual amount of rain in the several parts of the State, with isothermal lines of temperature; and lastly, the sylvia of the State, divided into districts.

The above is the map proper, while the margin is filled with useful tables, such as the elevation at the principal points; a colored diagram of the geological formations, population, time table, showing the difference in time between important points, etc. The map is designed particularly for the use of schools, and should be in every district in the State. Business men cannot well do without it, and will see its advantage at a glance. Every family, with any pretensions above the poor white trash of the Slave States, should have one of these maps.

We are proud of this map, from the fact that it is gotten up by one of our own State. Prof. Wilbur has shown that we are not fully dependent on New York for our maps. The work places Chas. Shober among the best artists of the day.

We learn that it is to be sold by canvassers.

We should have said that Dr. Vasey of Peoria, is responsible for the botany, and that Loren Blodgett, the well known author on climatology assisted in that department.

GRAPE CULTURE.—The grape fever is at a high stage of excitement, too high we think to be good for the patient. We propose to throw a little cold water on it to cool it off.

To grow grapes to advantage, requires no small amount of practical skill; and to obtain this, time is required. Hundreds are rushing into vineyard

planting, who have never grown a pound of grapes, and this for the simple reason that somebody has made a fortune at it. We have a friend who had the fever some years since, having taken the fever from the Cincinnati growers. A thousand vines were ordered, and the ground trenched two feet deep. The vineyard is now nearly ten years old, some years he has grapes for family use and again he has none. Last year the crop was very good and he sold two hundred pounds, at eight cents a pound. The varieties are Isabella and Catawba.

Our advice is to begin moderately, buy a few vines at first, and if you can succeed, you can soon get all the vines you want, from your own stock.

First try the Hartford Prolific, Concord and Diana, and if you want a white grape, take Taylor's Bullit. To these can be added others as the vines cheapen. Adorondick at \$5.00 will hardly pay, for you will soon be able to get them at better rates, and will know more of its value. At present it should be remembered that these new grapes are highly praised to sell the plants. Some of them will doubtless prove valuable, but let old hands at the business decide this fact.

SHADE TREES IN HIGHWAYS.—The importance of planting shade trees along our highways has been almost entirely overlooked. A general adoption of the system would be of great advantage to the health and comfort of the people and add largely to the beauty of the landscape. In winter these rows of trees would break the wind and hold the drifting snow, and in summer make long, pleasant, shady lanes for the traveler. On our open prairies they would also contribute their influence towards the summer shower, that so often seek the groves and wood begirt margins of the streams.—We have an abundant supply of rain for the year, but it is not evenly distributed. These avenues of trees, if planted along all of our highways, would without doubt do much to equalize the distribution. "The beauty and comfort that would be afforded by these trees after a few years, can hardly now be conceived. They would also contribute much to the public health. The beautiful law of compensation established by the Creator, between the animal and the vegetable kingdoms should not be lost sight of. Trees as well as men and animals breathe, but they do not appropriate from the atmosphere precisely the same elements, but rather the opposite. In the process of respiration the animal organism appropriates the oxygen of the atmosphere, and exhales carbonic acid gas, while the trees through their leaves, give off the oxygen and appropriate the carbonic acid; the carbon thus obtained goes to build up the tissues of the tree!

thus an equilibrium is maintained between animal and vegetable life, which is essential to the health of mankind. In populous cities and neighborhoods this equilibrium is in some degree destroyed, and is one of the causes of the mortality which prevails in such districts, and is not the least among the considerations which should encourage the planting of trees in the streets and highways in every settled country. Then, what could be more beautiful than long avenues of thrifty trees extending through every highway, and besides the grateful and cooling shade they would cast upon the traveler in summer, as well as the protection they would afford to everything living in breaking the force of the bleak winds of winter."

Trees from the forest can be planted, if others cannot be had, but care must be used in selecting those that grow in the more open exposures or in old *choppings*, where they have become stocky and hardened to exposure. Where trees can be had from the nursery, all the better, for these have better roots, and are in all respects better adapted to transplant.

Evergreens, as a general thing, are too expensive to set for wind-breaks, and are not adapted to high ways; we must, therefore, select deciduous trees. The Lombardy poplar is being extensively used for lanes and roadsides in many parts of the State. In Winnebago and Boone counties they are quite abundant. In the north part of Dupage county we have seen long lines of this tree. The tree is of rapid growth, and by planting eight feet apart will soon make a wall of foliage almost impervious to the wind. As a shade along the highway they are the least valuable of any tree. On the south side of an east and west road they might be admissible, but less so in any other aspect. When planted the fence could be set ten feet into the bounds of the road and plant cuttings, or two year old trees, eight feet apart, and eight feet within the road bounds, that is twenty-three feet from the center of the highway.

The white elm, although a slow growing tree, is too valuable to pass by, and should be put in the more wet places, interspersed with the white willow. The soft maple of our river bottoms and grove swamps, is also a rapid growing, hardy tree for this purpose, especially if the soil is a little moist. The silver maple of the nurseries are better adapted to dry land and make a beautiful tree. Of this latter we have a line of a mile bordering our farm. The Linden or basswood is also a pretty tree, as well as the sycamore.

Farmers can grow their own trees if they choose, and if properly protected with a fence, can be set out when quite young, which plan is the best in most cases.

We have seen apple trees set in the manner above stated, and which made a very pretty appearance, especially when loaded with fruit; but in this case none but upright growers should be used.

In the spring of '58 we set a row of near half a mile, of the silver leaved maple, of trees some two inches in diameter, but a neighbor's oxen took such a fancy to them that we had to move the fence ten feet within the highway boundary and make a new plantation some three years since.— These are now growing finely, and in a few years will bid defiance to our neighbor's kine.

BLACKBERRY WINE.—While attending the Vermillion County Fair at atlin last September, our attention was called to a sample of the above wine made by Mrs. Carr. The superiority of the sample induced us to obtain the mode of making, which Mrs. Carr very kindly gave us:

To one gallon of berries add one gallon of water, mash the berries and add two pounds of sugar; let this stand twenty-four hours and then strain thro' a cloth. Put the strained liquor in a jug or barrel to stand until wanted for use. It will be ready in a few months, but a year is better.

COMSTOCK'S ROTARY SPADER.—Since the State Fair we have received several letters of enquiry in regard to the above machine. We have no means of knowing what is being done in the way of manufacturing, but presume that the inventor is not idle. We shall be pleased to see it in the field in competition with gang and clipper plows. Its cost, \$200, will preclude it from small farms, nor will large farms be disposed to invest in them, only as they become satisfied of their value. This proof must of necessity come slow. While ten and twenty dollar implements can soon be spread over the State and find a lodgment in every neighborhood, it is a comparatively slow process to place even one of the \$200 implements in each county of the State much less one to each neighborhood. A million of dollars would not supply the demand for the State, should the spader prove, as it now promises to be, a success.

Onions.

In Spain and other European countries onions are among the staple products of the garden and consumed in large quantities by all classes of people. In a pathological point of view they are indispensable. They are considered a sure preventive against dropsy, a disease too common in this country, and one of the best remedies for the disease in

its advanced stages. As an antiscorbutic, it has no rival; it is, therefore, in great demand among our soldiers, who eat it in all forms.

Many people suppose that scurvy only occurs among seamen who have made long voyages, but this is a great mistake, as the disease is common in our armies, and not so very uncommon among the *white trash* of our State, who live on bacon, strong coffee without milk or sugar, and corn bread.

The first symptoms are sore gums and loose teeth followed with lassitude, if that is possible in one of these persons who are never around except at a dog fight, a turkey match or a raffle.

The demand for onions in the army has largely increased the quantity planted in the Western States, while the home consumption has also increased of late. This has made a drain on the stock of seed to that extent that the wholesale price of forty cents a pound two years since has gone up to nearly four dollars—a rather wide difference.—

Top onion seed has also advanced to some eight dollars a bushel.

One man planted one hundred and fifty bushels of onions last fall for seed, and is to plant the same amount this spring. The fall is the best time to plant onions for the seeds or setts, or for an early crop, but in this case they must be covered with straw to prevent heaving out.

As a general thing, too much seed is sown, thus crowding the plants, the result of which is small onions. We have several inquiries in regard to sowing broadcast on sod broken up last summer. We have considerable pro and con in regard to this mode, but have no confidence in it. The best mode that we have tried is to sow in July or August very thick, let the onion get of the size of small hickory nuts, when they are pulled, dried and packed away secure from moisture and too much frost. These are set out early in the spring and are sure to make large, fine onions very early in the season. In this way we never fail of a crop, while the black seed is not always relied upon for an annual crop. The onion is a bienial, and to make good bulbs the first season must be forced by rich soil and good culture.

CHEESE MANUFACTURIES.—At a Convention recently held at Rome, Oneida county, N. Y., the following cheese manufacturies were represented, which show an interesting matter of history. This system of manufacturing cheese upon a combined plan, and on a large scale, is one of recent origin, and this list shows how it has absorbed the dairy interest of that region. List of the delegates present, their localities and the amount of cheese interests they represent:

<i>Names</i>	<i>Factories located</i>	<i>No cows.</i>
Hugh Quinn.....	Oneida Co.....	527
Williams, Adams & Dewy.....	Oneida Co.....	350
G. W. Davis.....	Oneida Co.....	380
F. Clark.....	Oneida Co.....	350
Hiram Brown.....	Chemung Co.....	500
James Rathburn.....	Oneida Co.....	707
Charles Rathburn.....	Oneida Co.....	125
J. W. Brooks.....	Oneida Co.....	320
G. E. Morse.....	Madison Co.....	650
J. Greenfield.....	Oneida Co.....	300
D. Ellis.....	Warren, Mass.....	500
Isaac Shell.....	Herkimer Co.....	600
A. Austead.....	Oneida Co.....	500
J. G. Coates.....	Oneida Co.....	300
Henry Hill.....	Oneida Co.....	500
G. W. Wheeler.....	Oneida Co.....	200
Gold Creek Factory.....	Herkimer Co.....	600
Collins Factory.....	Erie Co.....	1,000
New Woodstock Factory.....	Madison Co.....	1,200
F. Smith.....	Oneida Co.....	575
Crosby & Huntington.....	Oneida Co.....	510
G. B. Weeks.....	Oneida Co.....	640
H. L. Rose.....	Oneida Co.....	1,000
B. F. Stephens.....	Lewis Co.....	800
T. Tillinghast.....	Cortland Co.....	900
Kenney & Frazer.....	Cortland Co.....	1,400
Rome Cheese Manu'g Ass.....	Oneida Co.....	624
Wright & Williams.....	Oneida Co.....	550
Whittaker & Curry.....	Oneida Co.....	500
D. Thomas.....	Oneida Co.....	500
L. M. Dunton.....	Lewis Co.....	800
Asel Burnham, jr.....	Chautauqua Co.....	500
Hank, Wilcox & Co.....	Chautauqua Co.....	600
Clear Spring Factory.....	Chautauqua Co.....	600
A. L. Fish.....	Herkimer Co.....	500
Schnser & Davis.....	Fulton Co.....	600
Caydatte Cheese Factory.....	Montgomery Co.....	600
West Eaton Factory.....	Madison Co.....	600
Miller, Fowler & Co.....	Oneida Co.....	800
R. U. Sherman.....	Oneida Co.....	130
Jerome Bush.....	Lewis Co.....	700
A. S. King.....	Oneida Co.....	200
S. Allen.....	Oneida Co.....	500
Alfred Buck.....	Oneida Co.....	475
Brown & Co.....	Madison Co.....	800
F. A. Norton.....	Madison Co.....	500
S. Conan.....	Madison Co.....	600
Savery & Coventry.....	Madison Co.....	600
Kirkland Cheese Co.....	Oneida Co.....	800
J. M. Dean.....	Oneida Co.....	300
Colosse Cheese Factory.....	Oswego Co.....	500
Harvey Farrington.....	Herkimer Co.....	470
J. H. Hubbard.....	Oneida Co.....	400
David Yourden.....	Oneida Co.....	150
Ezra Barnard.....	Oneida Co.....	220
Asa Chandler.....	Oneida Co.....	270
J. M. Farnam.....	Lewis Co.....	897
David W. Wilcox.....	Oneida Co.....	750
Levi Tanner.....	Oneida Co.....	950
E. S. Bennett.....	Oswego Co.....	250
PRIVATE DAIRIES.		
J. W. Davidson.....	Herkimer Co.....	55
J. B. Smith.....	Erie Co.....	39
Isaac Goodwin.....	Erie Co.....	41
Moore Adams.....	Erie Co.....	78
Asahel Burnham.....	Chautauqua Co.....	61
F. M. Wilcox.....	Chautauqua Co.....	31
D. H. Golden.....	Chautauqua Co.....	41
John M. Phillips.....	Oneida Co.....	30
Geo. Sisson.....	Chautauqua Co.....	40
Total cows in factories.....		6,881

These comprise only a part of the factories in twelve counties.

This new mode of dairying is becoming very popular, and bids fair to supersede the home dairies altogether. This will relieve the female portion of the dairy farm of no small amount of hard labor, and tend to a better quality of cheese. The apparatus in these large factories will of course be the best that can be procured, and must, of course, be under the charge of competent cheese makers who make it a trade, instead of those who make it incidental to other business. Will not our western dairies look a little into this matter.

The Temperature.

TMERMOMETER IN THE OPEN AIR.

Day of Month.		7 A. M.	2 P. M.	9 P. M.	
1864.	January.....	1	—22	—18	—14
"	".....	2	—14	— 4	— 4
"	".....	3	10	17	8
"	".....	4	6	12	8
"	".....	5	—12	0	— 6
"	".....	6	—22	0	—14
"	".....	7	— 3	16	2
"	".....	8	—19	3	—10
"	".....	9	—10	12	8
"	".....	10	9	20	8
"	".....	11	— 2	22	16
"	".....	12	25	34	22
"	".....	13	18	35	32
"	".....	14	25	62	26
"	".....	15	16	24	18
"	".....	16	20	....	36
"	".....	17	36	32	24
"	".....	18	26	....	26
"	".....	19	20	20	25
"	".....	20	28	35	....
"	".....	23	20	50	40
"	".....	24	38	58	43
"	".....	25	36	56	44
"	".....	26	32	57	42
"	".....	27	42	64	50
"	".....	28	39	61	48
"	".....	29	42	58	43
"	".....	30	44	56	42
"	".....	31	39	49	54
Means		16½	29	22	
Mean for the month.....		22½			

It is interesting to have a record of the degree of heat and cold during the year, so as to compare one season with another, or ascertain how great a degree of cold will kill any given plant. But this is not all, we must know the average heat of the summer months, to enable us to know what plants and trees can be grown in a given place; we must also know the average temperature of winter, to show us what plants can be wintered in any given

exposure. We must learn further, that plants in one condition will endure more cold than in another. To enable us to be the judge of this, we must certainly study temperatnre, and the physiology of plants, or we shall often be l-ft in the dark.

This year we intend to publish monthly records of the temperature at this point.

A dash before the figure, or the sign minus, thus, — denotes so many degrees below zero, or at the point when a mixture of melting snow and salt will freeze. The freezing point being thirty-two degrees above this.

The cold of the 1st of January has attracted the attention of most people, and they generally exclaim that it is the coldest they have known. Let us look a little into this matter. At Jonesboro it was 20 ° below and in 1856, 22 ° below zero.

At Highland, in Madison county, (lat. 38 ° 40'), we have the following table:

1841 —2 °	1842 —3 °	1843 —4 °	1844 —5 °
1845 —7	1846 —1	1847 —5	1848 —5
1849 —3	1850 —8	1851 —4	1852 —15

The coldest day occurring in December on three occasions, in January six and February three.

It will will be seen by our record for January that the average of the month is 22½ °. In 1854 the average at St. Louis for the month was 20½, or three degrees lower than at this point; in 1849, 40½', making a wide difference. In 1834 the mercury went down to —19 °, in '45 to 23 °, in February of '35 it was at —25.

We can thus easily infer that this is strictly a continental climate and not easily effected by the ocean air currents. Shelter belts will enable us to guard against these sudden changes to some extent.

For the Illinois Farmer.

MUSCATINE, Feb 9th, 1864.

M. L. Dunlap, Esq., Dear Sir :

Yours of the 4th is duly received. I read with much interest your letters in relation to the destruction of fruit buds and injury to fruit trees in Southern Illinois by the extreme cold of the first of January, and can well appreciate the calamity to the enthusiastic fruit growers of that usually mild climate, having myself so frequently lost a small fortune in prospect by similar climatic drawbacks.

It is excessively aggravating to one of moderate means, who may happen to be imbued with an irresistible love of fruits and their culture, after having planted and cultivated with untiring zeal and solicitude his choice trees through several years to their maturity, to lose through the untimely occurrence of a spring frost, all hopes of a crop for

one year, when he must draw on his banker or himself for their continued culture, resting his hopes on the uncertainties of the next year; but when we add to the loss of a year's crop the loss of trees, obliging one to replant and again wait tremblingly in view of the liability to future disasters, the case becomes absolutely distressing.

But how are we to help ourselves, is the question. We must either trust in Providence or *cover our trees*. We all know that the laws which govern climate are wise, notwithstanding it is sometimes too wet and sometimes too dry, sometimes too hot and sometimes too cold, to answer our particular and immediate wants. A kind Providence has given us intellectual faculties by which we can obviate many of the casualties which result from such emergencies.

Underdraining and irrigation are our remedies for too much or too little rain, but they involve much labor or capital; nevertheless they are becoming every day more important, and will soon be generally regarded as absolutely essential to good culture.

Will it *pay* to cover trees with such an inclosure as will protect them against the terrible cold which at intervals sweeps over the length and breadth of this fair land? I think so. As in underdraining, it will require capital, but it is believed the crop will pay interest on the investment, even in seasons when it is in competition with local crops in the open air, as a general crop seldom occurs throughout the entire country in one and the same season, and in seasons of scarcity the profits would be large. It is probable that the capacity of the trees for productiveness will be much increased by an efficient winter protection, and the crop can be easily advanced one week by opening the shutters to the sun in warm days early in spring and closing at night, as we are in no fear of late frosts.

Large peach trees are apparently killed in this region, and some varieties of apples and pears are slightly damaged in the fruit spurs, which may probably shorten the crop of fruit this season; but the plums and Richmoud and Morello cherries look perfectly sound in wood and bud.

Yours respectfully,
JAMES WEED.

—Dr. Weed has promised drawings of his plan for protecting fruit trees for the purpose of insuring a crop every season. That he will succeed we have no doubt, but the profit is the next question. With the peach and apricot north of 40°, it is the only way by which a crop can be secured, and if it will not pay for market purposes, yet might do for family use in a small way.—Ed

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Special Notices.

AGENTS.—We do not appoint any agents—all are voluntary. Any person so disposed, can act as agent in any place.

ENLARGE YOUR CLUB.—Will not the friends of the ILLINOIS FARMER inquire how many copies of the FARMER are taken in their respective offices, and pass around among those who ought to have their names added to the list? Our terms are so low to clubs of ten and twenty that we ought to have one or the other made up at every office in the State, and at every office in Central Illinois, one of twenty or more. Will our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?

TO SINGLE SUBSCRIBERS.—You receive the only copy of the FARMER that goes to your post office. Can you not send one, two, three or more new subscribers, without any trouble? Try. Sample numbers, etc., sent free.

DRAFTS.—Those remitting us large amounts of money, will please send us drafts on Springfield or Chicago, less they exchange. If you send cash in a letter, be sure that it is well sealed and well directed, to Bailhache & Baker, Springfield, Illinois.

THE FARMER AS A PRESENT.—Any of our subscribers who wish to make a present of the ILLINOIS FARMER for 1863, can have it at the lowest club rates, when out of the State. For fifty cents you can treat your Eastern friends to a Western Agricultural Paper. In no way can you invest that amount to so good advantage to emigration.

SEND NOW.—Any person who remits pay for a club of ten or fifteen, or any other number at the specified rates for such clubs, can afterwards add to the clubs, and take advantage of the reduction. Thus a person sending us five subscribers and three dollars, can afterwards send us three dollars more and receive six copies.

TO THE CASUAL READER.—This and other numbers of the ILLINOIS FARMER will be sent to many persons who now use it for the first time. Will they not examine it, and if they like it, subscribe for it, and ask their neighbors to subscribe? Sample numbers, prospectuses, etc., sent free to all applicants. See terms elsewhere.


HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighborhood, can easily make up a club of five, ten or twenty, but no time should be lost in doing so, for your neighbors may send east for their


paper which, though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us Western farming.


HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage:


1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it.
2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them.
3. Get post masters interested. They see everybody, and are efficient workers.
4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers.
5. Begin now, before the agents of Eastern papers get up their clubs.

This last hint is especially important. Let us hear from you soon. See terms elsewhere.

 Clubs may be composed of persons in all parts of the United States. It will be the same to the publishers if they send papers to one or a hundred post offices. Additions made at any time at club rates. We mail by printed slips, which are so cheaply placed on the papers, that it matters little whether they go to one or a dozen offices.

 Correspondents will please be particular to give the name of the post office, county and State.

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 Address

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Springfield, Illinois.

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February, 1864. 4m.

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Feb., 1864—3m*

Philadelphia.

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PUBLISHED AT

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BY

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AND IS EDITED BY

M. L. DUNLAP, Tribune's Rural.

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THE ILLINOIS FARMER.

VOL. IX.

SPRINGFIELD, ILL., MARCH, 1864.

NO. 3.

The Illinois Farmer,

DEVOTED TO THE

FARM, THE ORCHARD AND THE GARDEN,

PUBLISHED BY

BAKER & PHILLIPS,

SPRINGFIELD, - - - - ILLINOIS.

M. L. DUNLAP, Editor.

All business letters should be addressed to the publishers.

✍️ EXCHANGES and all matters pertaining to the editorial department, must be directed to ILLINOIS FARMER, Champaign, Ill., as the editor resides at that point, and is seldom at the office of publication, from which he is distant over eighty miles.

* * For terms see prospectus and special notices in advertising department.

March.

When on the bough the purple buds expand
The banners of the vanguard of the Spring,
And rivulets, rejoicing, rush and leap,
And wave their fluttering signals from the steep.
LONGFELLOW.

With March begins the active duties of Spring—the first putting forth of the muscles of the year. With us the buds begin to swell, the grass sends up its tiny blades in the sheltered nooks and swale like meadows. The spring wheat and barley must be sown, and towards the last of the month the oat crop and the flax must be put in. The grass and clover seed is sown, and large preparations making for the great staple, corn. The orchard, the small

fruits, shrubs and plants must be set during this and the following month.

If we do not lay the foundation of the year's crop with care during this month, we may not expect to succeed during the remainder of the year. It is in getting a fair start, that will enable us to keep up with the seasons work.

North of this, little can be done until the last of the month, beyond getting ready, as the land is often in the hands of Jack Frost, but hereaway, there is seldom any impediment to the plow after the tenth of the month.

The canes of the raspberry should now be cut back, before they commence their annual growth. If you want improved berries, do not neglect this work. The very old wood should be cut out of the currant bushes, but keep your knife and shears out of the gooseberries. In England and north of 44°, where the sun shines as through smoked glass, it is well to thin them out for heat and air, but in our climate this will ruin them; better give them shade and thick bushy tops, than the English mode of treatment.

This spring we intend to ridge up for strawberries, and plant with a view to cut off all the runners. The ridging can be done with Stafford's cultivator or any one that is arranged to throw the earth to the center of the row.

Amid the sowing and planting of spring do not forget the small fruits—currants, gooseberries, strawberries,

raspberries and blackberries. You had better let the orchard go another year than to leave out of the garden these great healthgiving fruits, so desirable during the heated term of summer. If you cannot plant more than half a dozen trees, have three of these the Keswick Codlin, and three May Cherry, (Early Richmond,) as both of them will fruit early and abundantly.

In planting potatoes the last of the month, cover them deeply, say three to four inches. The Early York and Neshannock are the best sorts, Mathews Early Blue is also good. In the central and South parts of the State we cannot recommend any of the late growing sorts, such as the Carter, Peach Blow, Garnet Chili, Pinkeye, or English Fluke. The slow growing late kinds, in this climate grow too slow to be good, and we have settled down on the early, quick growing sorts; of these the most valuable for the main crop is the Neshannock. In looking over the New York market report for several years we have observed that this potatoe has continued at the head of the list for a uniform high price. While it is not the best potato for spring use, but its good size and smooth surface, destitute of deep eyes make it a favorite with the good housewife.

Among early cabbages the Early Winningstadt bears a high place.

In the culture of tobacco, we should by all means employ the hot bed, in which to start the plants. The crop will be a month in advance of that grown in the open ground, and in part out of the way of the tobacco worm, as the plant will be so far advanced that the worms will have less effect upon it.

Cotton planting received a severe check by the drouth and frost of last

year, but we are not disposed to give up the idea that it cannot be grown as far north as this point. We have no idea that it will do as well as farther south, but at present prices, we can afford to take something of a risk. The Tennessee green seed is the only variety that has thus far proved of any value in this State. The Chinese seed imported by J. N. Griswold, Esq., of the Ill. G. W. R. R., proved a failure, as we do not hear of a single instance of the seed germinating.

We do not expect to see either cotton or tobacco planted this month, but we give the hint that it may not be forgotten in April. We have a bushel of the green seed, to make trial of, in the hot bed, parties wishing a few seed can have them by sending a stamped envelop, or the seed can be had at Cobden at twenty cents a bushel.

Manufacture of Sorgho Syrup.

The sorgho question to a great extent has been monopolized by patent evaporator men, and those having seed for sale. An immense amount of puffing, if not downright lying has been done on their account. Instead of a detailed history of facts, we have had a surfeit of sorgho literature or book culture, from Wray and Olcott down to the present time, in which has been sandwiched now and then a fact.

Nearly every new enterprise has to pass through the hands of sharpers, and the slow process of incubation, as the children do with the measles and whooping cough, or for the calf to go through the grades of yearling, two-year old, three-year old, and finally is of sufficient age to be crowned with the yoke and bows, and at once becomes the useful ox.

These different stagos may not be necessary in the progress of introduction, but there is a class of men who never let an opportunity pass, and like the loafer who hangs around some recruiting station, watching his opportunity to introduce some new recruit to the officer, in hopes of obtaining the coveted fifteen dollars; so this class of men, wait around the *nucleus* of some new enterprise, in the hopes of sharing in the money that may be expended to develop it, or to place it among the necessities of the age.

Sorgho has been the child of fortune, since its first introduction; a perfect godsend to this class, who yet run it with cheap rollers, wonderful evaporating pans, sell seed of unquestioned purity and of surpassing virtues.

It is time we had a change of base, so as to place this valuable staple in its proper relation to the producer and the manufacturer.

In the first place, when the seed of this cane was presented to the people of the West through the Patent Office, the first idea promulgated in regard to the making of sorgho syrup was that each farmer should own a crushing and boiling apparatus, so as to work up his crop. Fancy soon built fortunes, and a grand rush was made, that put the enterprise back at least three years. From a hundred shops came these domestic fixtures, stamped as patented, and of course supposed to be useful. Wooden rollers or cheap, light cast iron ones were used for crushing, or rather capable of wringing out half the juice, with pans of the one horse kind to reduce it to syrup, all of which were valuable as a six dollar cider press, or a garden engine at a village fire.

It is a well attested principle, that a

farmer should only be a producer of farm products, and not a manufacturer in the general acceptance of the term. It is true that during the leisure of winter that he might make a few dozen brooms, repair his implements, or get up his beehives, but to attempt to manufacture his raw products on a large scale—to work up his wool, to reduce his corn to meal, or wheat to flour, is simply absurd. With no more propriety can he work up his sorgho crop, the cost of which is equal to producing and delivery at the mill. And yet the interested pan men and the roller men have generally fugged him into the idea, that this is the only true road in which to succeed.

At an early day we saw the absurdity of this plan, and have advocated the policy of sorgho mills on a large scale, at points where steam or water power could be cheaply applied.

At all stations where corn is shelled, the cobs supply an excellent and cheap fuel for either the fire pans or steam boilers. A thousand bushels of corn will furnish five tons of cobs, equal to the same weight of Illinois coal. This source of fuel has been nearly overlooked, and thousands of tons of cobs thrown out to rot in the streets. During the shelling season these should be stored in sheds from the weather.

The slack or coal screenings of our coal mines, are another source of cheap fuel, where the cost of transportation is not large. To use this coal the fines and fire grate require a little more space.

The farmer should either sell the cane to the manufacturer at the market price, or have it worked on shares. At present the latter plan is gradually adopted, but will undoubtedly give place to the former. The manufacturer

having both capital and skill, will be enabled to obtain a better price than the farmer, as his products will be of a more uniform quality, and holding it in large lots can the better supply the dealer, or ship to distant points.

Of course the large outlay for cheap fixtures will go for old iron, and the cost of the experiment fall upon the farmer.

The making of maple sugar is quite another thing, for neither the trees nor the sap can be transported to distant points for the reduction of sugar. The process is cheap and simple, while that of sorgho needs a powerful pressure to extract the juice, large settling vats and clarifiers, with expensive steam apparatus for boiling and other fixtures, the sum total of which, amount to several thousand dollars, say six to eight thousand for a crop of four to six hundred acres; an outlay of fixtures, the interest of which would swamp the whole product of a sugar orchard.

One of the most complete if not the best establishments for the making of sorgho sirup, is that located at St. Johns on the Illinois Central R. R., 286 miles south of Chicago, and owned by the Illinois Central Coal Mining Co., and under the Charge of A. W. Nason, one of the principal owners.

These works are substantial and constructed with a view to use rather than show. As Mr. Nason has no other interest in the mill than its use, no patent men to puff and no seed to sell at speculating prices, we can rely upon his estimates.

We spent a day with him in looking through the establishment, and taking notes for the benefit of our readers.

Parties intending to go into the business, would do well to take a look at

this mill before deciding on their plans. The main building is 35 by 60 feet, with eighteen feet posts and lighted in the roof. Attached to the south side and flush with the east end is a shed for cane, also 35 by 60 feet. An endless apron runs through this shed to carry the cane to the rollers, each twenty inches in diameter, and three feet long. The cane is placed on the apron to the depth of four inches, and is run through in that manner.

This mill is capable of crushing the cane from eight acres of heavy cane a day, or not less than one hundred and sixty loads a day. It requires three men to feed the mill. Here the labor ends, steam taking the place of manual labor.

The *begasse* is carried by another endless apron to the opposite side of the mill, and elevated into carts, whence it is hauled for mulching, or left in heaps to rot. No leaves had been stripped from the cane last fall. Some twenty head of cattle and the same number of mules were being wintered on the *begasse* with the addition of a small amount of the seed. Had the cane been stripped and fully matured we doubt if the *begasse* would have been of any value for feed in this way. When other fodder is abundant we would prefer the *begasse* on our meadow or in the orchard, where it would be of more value, especially for the latter uses.

The engine is forty horse power, perhaps more than is required for crushing, elevating the juice to the iron tank above and running the fan to force cold air into the steam pan and cooler, but an extra boiler is required to supply steam for the boiling which must be run at a pressure of seventy pounds.

Of course a mill can be made of a

much less capacity, but it is probable that this size will be found the most economical, as its capacity is six to eight acres of heavy cane a day, and from the middle of August to the middle of November, say one hundred working days of ten hours each, six to eight hundred acres of cane can be worked. Allowing an average of two hundred gallons to the acre, we would have over 20,000 gallons of sirup for the season's work. This at 20 cents a gallon for the use of the mill will make the pretty little sum of four thousand dollars a year on an investment of six thousand. Mr. Nason estimates the vinegar will pay the whole running expense of the mill. This estimate was made, when highwines the chief ingredient used in vinegar making, ruled much lower than at present. In making 5,000 gallons of syrup there was 200 barrels of vinegar from the skimmings. In domestic practice it is well known that the skimmings are thrown away and this source of profit lost.

The boilers are placed under a shed on the north side of the house, thus leaving the whole interior for working. The rollers are horizontal and placed on the ground floor, under which is a large vat for the juice. From this vat the juice is pumped to the upper story into a large tank, first it runs into the heating and clarifying pan, then into the settling tanks, from which it flows into the steam pan, where it is reduced to syrup, from this into the cooler, and lastly into the barrel, which is on the ground floor near the rolls. In all this arrangement, the saving of labor is carefully considered.

From the large tank the juice is drawn into the fire pan. This pan is twenty-seven feet long and four and a

half feet wide. The sides are horizontal as is also the end next to the arch, while the other end is more sloping for the purpose of skimming. Coal screenings or what is called slack or siftings from the coal mine is used to heat this pan, which is near a dozen feet from the ground floor. This is slowly heated when the scum rises, and by the ebullition is thrown back to the hind end of the pan, where it is easily skimmed off. The saving of labor in skimming is one of great importance, and at once throws all other pans into the shade. At the end of the pan is a trough connecting by a spout with the vinegar tank, into which the skimmings find their way, thus keeping the floor and ground clean and tidy; and here is one great point gained, instead of the filthy, sloppy condition of the ground around the pan, which is so often seen in domestic practice—this filthy stuff is made to pay the running expense of the establishment, and is in no way obnoxious to good taste. The boiling is continued until the juice is reduced to fifteen degrees *Beaume*, when it is run into the settling tank, two of which are used. At this stage lime is added to correct the acid. After remaining a few hours in these tanks the juice is then run into the steam pans, drawing from and filling the settling tanks alternately. This steam pan is sixteen feet long and five wide, and made on the same plan as the fire pan. The steam coils in this are arranged transversely across the pan and are of brass. Under these coils which are raised three or four inches above the bottom of the pan, are several led pipes some two inches in diameter, and which were perforated with a row of small holes on the under sides. These lead pipes are connected

with a fan that forces cold air through them, thus keeping the boiling liquid at a comparatively low temperature and aid in the evaporation. When the sirup is reduced to a proper consistency it is drawn into the cooler, on the bottom of which is several coils of lead pipe as described above, by which the hot sirup is rapidly cooled, thus preventing any danger of scorching or imparting to the sirup a burnt taste, so common to all samples in domestic use.

This plan of forcing cold air into the boiling sirup is not new in sugar making at the South, but is believed to be the first instance in which it has been applied to the boiling of sorgho sirup. By the use of the blower the color of the sirup is improved, making it of a clear amber, and it also prevents any sediment settling on the bottom of the pan, as all impurities are forced to the surface and thrown back to the sloping end of the pan and skimmed off. The skimmings run into a tank directly under this pan, where it settles, and the liquid is drawn off. One gallon of this pure liquid makes three of vinegar.

To prevent the steam from the pans filling the building with its unpleasant odor, they have covers or lids that close all but the end where the skimming is done. These are hung with pulleys, so as to be easily handled; over the open end is suspended the mouth of a large wood ventilator flue, which conducts all the offensive matter out through the roof, thus relieving the entire building of the odor arising from the fecculent matter, and the steam that would condense on the roof and be constantly dripping down. The building is thus kept dry and pleasant at all times, and free from that sloppy condition that so often renders a cane mill a very unpleasant place.

The water for cleaning tanks, pans, etc., is elevated into a large tank near the roof, and is carried through hose to the point where it is needed, thus giving it great force, to wash out such implements as are required.

The reader will see that in this mill the labor is comparatively light, the whole is clean and neat, while a superior sirup is made.

Labor is economised in every part, the cane goes direct from the wagon to the endless apron, or is stored along side of it where no extra hauling is required. The *begasse* goes into the cart, is hauled out of the way and dumped in the usual manner. The juice is pumped to the highest point, from whence it is drawn at easy stages until it arrives in the barrel, on the ground floor ready for market. The labor of skimming is reduced to a mere trifle, as the form of the pans is such as to throw all the impurities to one end, in the act of boiling, when with the aid of a wooden hoe it is scraped out into the trough that leads to the vinegar tank.

The mill cost six thousand dollars and is capable of working up six to eight acres of heavy cane a day. The quantity made last fall was 5,000 gallons from 250 acres of cane planted, or twenty gallons to the acre, to which is added two hundred barrels of vinegar. The drouth and frost combined to nearly ruin the crop.

The barrels used are made of Don-gola of cypress in the same manner as those used on the plantations of Louisiana.

We might further extend these notes on the manufacture of sorgho, but have not the time at our disposal. Our object is to place the manufacture of sorgho sirup on its proper basis, by

taking it from the kitchens and sheds of the farmers to the well regulated scrogho mills that must be erected to supply the demand. Of the culture and varieties of seed we shall next treat.

Fruits for Egypt.

Notwithstanding the valuable labors of the State Horticultural Society at Alton and previous meetings, we propose to have our say in regard to the fruit list of Egypt, and trust ourself to the tender mercies of the orchardists of that section to see that we have a full hearing and a fair field, before we are turned over to our enemies, the peddlers and amateur nurserymen. We do not ask any great favors of these parties, for like leeches on other important interests, they must be fed, clothed and have their being; not that it is necessary to the advancement of the orchardist, but that like barnacles to a ship, they will still cling to it, and as soon as one lot is scraped off another gathers on. We are an orchardist rather than a nurseryman, and while we grow large in the first capacity, we decrease in the latter. We have long since come to the conclusion that the world was made a trifle too large for anyone person, though some people of rather mature age hug the folly that they can grasp it without difficulty, but to the list of fruits, and first of

APPLES.

The **Early Harvest** has a well earned reputation, and would receive more votes to-day throughout the State than any apple of its season. The reason of this rests upon its previous reputation rather than its merits as compared with others. The **Red Astrachan** is the better apple for the orchardist, and will

return him more dollars nett profit.—The tree is hardy, a good grower, bears large crops, like the **Early Harvest** alternate years, and being showy and of red color, will sell better in a distant market, as the bruising does not show so badly as that of the **Early Harvest**. **Red June** may be put down as next in value.

Sweet apples are little wanted at the season of early apples, as the appetite at that time craves the acids. Yet a small quantity can be sold from the stands, but the kitchen demand is limited. For a cooking apple the **Keswick Codlin** has thus far proved valuable, but as yet it is too little known to assert that it is positively the best, although those who have it give it this reputation.

Autumn apples are of little value in that part of the State to the orchardist, as he must be the first and last in market, leaving the middle season to his more northern neighbor to supply the demand of late summer, fall and early winter. In these remarks we are confined strictly to the supply for distant markets:—the north for early summer, and the south for late winter. The *up country* furnish the supplies for late summer and fall to the south.

The best fall and early winter apple is doubtless the **Buckingham**, next in order is **Yellow Bellflower**, **American Golden Russet**, **Smith's Cider**, **Winesap**, **Ben Davis**, **White Pippin**, **White Winter Pearmain**, **Rome Beauty** (promises well), **Rawle's Janet**, **Willow Twig** and **Little Romanite** for spring cider, **Pryor's Red** is a good but not a profitable market apple, **Newtown Pippin** must give place to **White Pippin** which is good on all soils. Sweet apples have not been sufficiently tested as yet

to make up a list. It is probable that time will prove that other varieties are equally valuable, but to those who wish to be positive, to plant an orchard that will not fail them, to keep within the above list.

PEARS.

Doyenne de Ete, Osband's Summer, Belle Lucrative, Bartlett, White Doyenne, Louise Bonne de Jersey, (Flemish beauty rots at the core,) Duchess de Angouleme, Swan's Orange, and Vicar of Winkfield, may be classed as the best on a dozen years trial.

GRAPES.

Isabella and Catawba rot badly, Delaware has not proved satisfactory in all situation, Diana promises well, as also Concord. What effect it may have to put a shelter of say a foot wide over the top of the trellis we cannot say, but have hopes of it.

STRAWBERRIES.

Willson's Albany in the timber land of Egypt is the berry for market. The long distance and time required to reach the north, give this berry the advantage of all others on account of its keeping qualities.

TOMATOES.

The apple tomatoe is the only one now planted for market.

PEACHES.

Hale's Early promises to be the earliest by some four or five days, and is being largely planted. Troth's Early, or as some suppose, Haine's Early and Galbraith seedling are the same and not distinct.

Cole's Early Red, Coolage's Favorite, Honest John or Large Early York, Early Crawford, Old Mixon Free, Late Crawford, with Smock and Heath Cling, follow in the season as named,

and make up the best possible collection for market.

These kinds are more particularly selected, because they seldom rot on the tree, while many sorts otherwise equally good are of no value on account of the rot. This remark holds good also in the case of the apple.

Poetry.

The Pet Plant.

A florist a sweet little blossom espied,
Which blossomed, like its ancestors, by the road-side;
Its sweetness was simple, its colors were few,
Yet the blossom looked fair in the spot where it grew.
The florist beheld it and cried, "I'll enchant
The botanical world with a sight of this plant;
Its leaves shall be sheltered and carefully nursed,
It shall charm all the world, though I met with it first
Under a hedge."

He carried it home to his hot-house with care,
And he said: "Though the rarest exotics are there,
My little pet plant, when I've nourished its stem,
In tint and in fragrance shall imitate them.
Though none shall suspect from the roadside it came;
Rodum-sidum I'll call it—a beautiful name—
While botanists look through their glasses and view
Its beauties, they'll never imagine it grew
Under a hedge."

This little pet plant, when it shook off the dirt
Of its own native ditch, began to be pert,
And tossed its small head, for perceiving that none
But exotics were round it, it thought itself one.
As a wild flower all would have owned it was fair,
And praised it, though handsomer blossoms were there;
But when it assumes hot-house airs, we see through
The forest tints of its hues, and suspect that it grew
Under a hedge.

In the byways of life, oh! how many there are
Who, being born under a fortunate star,
Assisted by beauty or talent grow rich,
And bloom in a hot-house instead of a ditch;
And while they disdain not their own simple stem;
The honors they grasp may gain honors for them;
But when, like their pet plant, such people grow pert,
We soon trace them to their original dirt—
Under a hedge.

Wonders of the English Language.

The English language must appear fearfully and wonderfully made to a foreigner. One of them looking at a picture of a number of vessels, said: "See, what a flock of ships." He was told that a flock of ships was called a fleet, but that a fleet of sheep was called a flock. And it was added for his guidance in mastering the inaccuracies of our language, that a flock of girls was called a bevy, that a bevy of wolves is called a pack, and a pack of thieves is called a gang, and a gang of angels is called a host, and a host of porpoises is called a shoal, and a shoal of buffaloes is called a herd, and

a herd of children is called a troop, and a troop of partridges is called a covey, and a covey of beauties is called a galaxy, and a galaxy of ruffians is called a horde, and a horde of rubbish is called a heap, and a heap of oxen is called a drove, and a drove of blackguards is called a mob, and a mob of whales is called a school, and a school of worshippers is called a congregation, and a congregation of engineers is called a corps, and a corps of robbers is called a band, and a band of locusts is called a swarm, and a swarm of people is called a crowd, and a crowd of gentlefolks is called elite, and the elite of the city's thieves and rascals are called the roughs, and the miscellaneous crowd of city folks is called the community or the public, according as they are spoken of by the religious community or secular public.—*Ex.*

Correspondence.

For the Illinois Farmer.

Durability of Willow.

BLOOMINGDALE, Dupage Co. Ill, Feb. 9, '64.

M. L. Dunlap, Esq., Dear Sir :

In answer to your inquiry in regard to the willow trees on the creek bottoms, I have to say that the posts lasted only from six to seven years, while the rails appear very durable. These willows are fast growers: on examination of the stumps I find they have thrown up from four to eight sprouts each, and which are now four to ten inches in diameter and fifteen to thirty feet high.

Yours truly,

C. E. KINNEY.

—The trees alluded to grow along the margin of Mechem's Creek, a small stream that runs through Mechem's Grove. The most of them were about a foot in diameter, but one that stood out near the edge of the prairie had been broken off by the wind some twenty feet from the ground, and was two and a half feet in diameter three feet from the ground. It is now about twenty years since these willows were cut for fence posts and rails, and it is probable that the heavy thicket of alders and other dense swamp growth have retarded the growth of the willow sprouts. It is also probable that willow grown in a more open aspect would be more durable for fence posts.

We wrote to Mr. K. for the purpose of ascertaining the durability of the swamp willow, so as to form some conclusion in regard to its value for posts. We have not supposed that it would make a durable post unless kianized in some way. The soft woods unless resinous are not very durable when set in the ground. Had all the sprouts but one at each stump been rubbed off, the young trees would now compare very well with the original in size, but not in hight, as the old trees were

very tall and of very equal growth for thirty or forty feet before they formed the top branches.—We trust that farmers who have waste places and odd corners will plant them to the willow; the timber will be wanted for fencing, for firewood and other uses. We do not expect to see a steam sawmill on every section to saw up willow logs, but we do expect to see willow extensively used for firewood and other purposes.—*Ed.*

For the Illinois Farmer.

Grafting the Cherry.

CRETE, Will Co., Feb. 18, '64.

M. L. Dunlap, Esq., Dear Sir :

The May cherry scions came to hand in good time, and up to this date I have set 1,800 grafts.

We have an abundance of the common Morello cherry here for stock, but which are otherwise worthless except for shade. Many of these trees are twenty years old. Three years since I grafted two of these trees standing in my yard, which were four inches in diameter, by cutting off some of the larger branches and inserting some twenty grafts in each tree, of the May or Early Richmond cherry. The second year or in June last, I picked a peck of nice cherries from these two trees. This was quite encouraging for the second year. For several years large numbers of the finer kinds of cherries have been sold here, while from the high price of the Early Richmond few of them have been purchased. But none of these finer cherries have proved of any value, and we now depend upon the Richmond entirely.

Last spring I set for my neighbors 1,600 grafts at the rate of \$3 00 per 100 and warranted them. I have now contracted to set some 5000 at the same price and have made a good beginning. I find no trouble in budding the one and two year old shoots, but the bark is too thick on the larger branches. On the whole I prefer the grafting.—This grafting of these otherwise worthless Morello stocks and making them produce good crops of cherries, will be worth thousands of dollars to this part of the county, and is creating no little excitement. I think my mode of grafting a valuable one.

Yours truly,

D. CORNISH.

—For the past two years we have been making an effort to introduce the May cherry, as being for our climate the only one of any value that we have yet had on our grounds. We are gratified to see it becoming popular. We have seen hundreds of trees that had been purchased for this variety, of tree peddlers, both from the East and of our home grown speculators, in fact some of our nurserymen

yet have it a little mixed, having purchased the Early May cherry, of New York, and the Early Montmorency under the name of the Early Richmond. This cherry is called the "Kentish" by Downing and Thomas, Early Richmond by Elliott and others. In Kentucky, Southern Ohio, Indiana and Illinois, it is known as May cherry, from the fact that it ripens the last of that month. Here it ripens the 10th of June. It belongs to the Morello family and should be worked on Morello stocks. With us it is of little value on either the Mazzard or Mahaleb stocks, and we have ceased to work on them. Those on the Mazzard die out in a few years, while on the Mahaleb they make slow growth and produce poor crops. The Morello has the bad habit of sprouting, and is very objectionable on that account; but if set on land plowed a foot deep, and set rather deeply, we find less trouble with it.

This cherry has proved a sure crop from its first introduction into the north part of the State, nearly twenty years since.—Ed.

Agriculture.

Winter Meeting

Of the Executive Committee of the Illinois State Agricultural Society.

The time fixed for the meeting of the Board was Tuesday, Jan. 5th, but owing to the great snow storm which seriously interrupted communication by railway throughout the whole State, and entirely blockaded it throughout the northern half for several days, there was not a quorum present.

The Farmers' Convention engaged the attention of all who were here until noon of Jan. 8th, when it was deemed advisable to organize the Board and proceed with such matters of business as could not properly be deferred to a subsequent meeting—such action as might be taken, to be subject of course, to review in full Board.

Accordingly at 2 o'clock P. M., President Van Epps assumed the Chair and called the Board to order.

On motion of Dr. Kile, calling the roll and reading the minutes of the last previous meeting were dispensed with.

By consent, Dr. Schröder, of Bloomington, read his statement on Market Gardening, illustrating his practice of that art, at the conclusion of which the Corresponding Secretary read the statement of S. W. Arnold, of Cortland, DeKalb county, on the same subject.

After hearing these statements the premium of

fered by the Society for the best Market Garden was awarded to Dr. Schröder. \$20.

Suggestions made by Dr. Schröder in the course of his statement and the remarks accompanying it directed the attention of the members of the Board to the propriety and necessity of inaugurating some movement for the purpose of encouraging the immigration of the industrious laboring population of Europe to this State, and accordingly the Corresponding Secretary prepared and submitted a preamble and resolution, which was unanimously approved and adopted.

Premium on Apple Orchards awarded to S. R. Hurd, Sangamon Co., Ill. \$15.

On Motion of H. S. Ozburn, Board adjourned to 9 o'clock, A. M., to-morrow.

9 o'clock, A. M., Jan. 9, 1864.

Board met pursuant to adjournment. On motion of A. B. McConnell, the subject of awarding premiums on Essays was taken up, and after reading the essays presented, the following awards were made:

On "The In-door Adornment of Home," to Mrs. John R. Woods, Upper Alton, Ill., premium \$10. On same subject, by Miss Sarah E. Rumsey, Manteno, Ills., and another by Mrs. Frank C. Edwards, of Woodburn, Ills., were highly commended and the three were ordered to be published in next volume of transactions.

On the breeding, rearing and management of swine, to H. C. Smith, of Ridge Farm, Ill., premium, \$10.

Miscellaneous.—On "The Education of Farmers' Daughters," by Miss M. E. Murtfeldt, Rockford, highly commended and ordered to be published in the transactions.

Grape Wines.—Best three bottles of Catawba, to Dr. H. Schröder, Bloomington, Ill., \$10; Best three bottles Isabella, to same, \$10; Best three bottles from any other grape (Delaware), \$10.

Fruit Wines.—Best Strawberry Wine, Thos. Bradbury, Pike county, \$3.

Vinegar.—Best six bottles Vinegar, S. R. Hurd, Sangamon county, \$3.

Miscellaneous.—Best Morello Cherry Wine, Thos. Bradbury, Griggsville, Ill., \$3.

The last named exhibitor had a large number of samples of domestic wines on exhibition and deserves great credit for his enterprise and energy, but unfortunately many of the bottles containing the samples had been used for purposes which seriously affected the flavor and quality of the wines.

There were also exhibited, by Mr. Eisenmyer and Mr. Engleman of Mascoutah, St. Clair county, Ill., samples of Catawba, Concord and Norton's Virginia Seedling, wines, which were pronounced superior.

to those or Dr, Schröder, but not being in competition they could not receive premiums. The Board, however, highly commended them, and expressed the hope that these gentlemen will make a full display next year.

On motion of B. H. Whiting, the awards on Farm products, Dairy Products, Sugars and Sirups were postponed to next meeting, with permission to all who wish to do so to yet make entries and forward them samples.

The following resolutions were on motion of Mr. Whiting adopted:

Resolved, That the Board hereby tender to Prof. C. D. Wilber, Secretary of the Illinois State Natural History Society, their thanks for a copy of his map of Illinois, just published and embodying geographical, geological, topographical, meteorological, botanical and statistical information of great value to farmers and other citizens not to be found elsewhere in a form so convenient for reference.

Resolved, That we fully appreciate and commend the efforts of the Illinois State Natural History Society and its Secretary, Prof. Wilber, to diffuse, by means of popular lectures, publications and otherwise, a correct knowledge of the mineral and other resources of this State.

On motion of Dr. Kile,

Resolved, That the annual exhibition of this Society for 1864, commence on Monday, Sept. 12th, and continue six days at Decatur.

On motion of Mr. Ozburn, the Board adjourned to meet at these rooms on the 1st day of March next.

JOHN P. REYNOLDS,

Cor. Sec'y Ill. St. Ag'l Soc'y.

AGRICULTURAL ROOMS. Springfield, Jan. 9, '64.

From the Country Gentleman and Cultitator.

Farming "Long Time Ago."

Every observing man who has been for the last sixty years upon the stage of action, must have seen farming in all its simplicity—where the farmer had no resource to renovate his soil but his own scanty barnyard manure, and even of the value of that he was imperfectly informed. It is not many years since the use of clover was first introduced—that of gypsum soon followed; the effects of the last struck every one with surprise, particularly when applied to the former, and it was really thought by those who observed it that no other renovator of the soil would be necessary. But time has since developed that great as it was and is now the benefit of gypsum, yet it requires not only constant renewing, but cannot supersede the application of stable manure, and successful farming now requires an augmentation of the list to an almost indefinite extent.

If we remember rightly, our list of fertilizers thirty-five years ago extended very little if any further than the two substances already mentioned:

and gypsum was especially required to the growth of clover; so too it was then a principle in farming to task the soil to the utmost capacity to raise wheat and corn—if we could; and if we could not to try rye, buckwheat and oats. We followed a rotation of crops not to enrich the soil, but to impoverish it; not to enrich ourselves, but to trust alone to our own luck and the bounties of Providence. And who does not remember the slow process when the harvest was gathered with the sickle, followed by the use of the half cradle.—That, however, was before the time we now speak of, and the cradle as a harvest tool has not for many years been very generally used. It is a tool, however, of modern times, and its use was principally confined to this country.

The plow and the harrow were then almost the only farm implements used for the cultivation of the soil—the former made of wood, but shod with iron, the latter clumsy and imperfect. The potatoes grown were red and watery—no other kind was known—it was hardy and strong to the taste, and not very productive; as to the different kinds of seeds sown, sufficient care was not taken in the selection, and much of it was unclean.

The farmers' cattle were of the ordinary common kind; a few valuable for milk, but none peculiarly so for the carcass. Common horses were raised in unknown numbers, and we have seen the whole side of many a large barn, consisting of horse stables, filled with them from one end to the other—the consequence was that the horses emptied the barn of hay and grain at the approach of spring, and the cattle the straw. The first was an unprofitable animal; they were raised at a ruinous loss.

Such was the course of farming when our land was cultivated by slaves; it was an old adage that "the hogs ate the corn and the negroes ate the hogs." All this was literally true, as we have often been witness of the fact. Could our farmers by such farming be otherwise than poor? Could they be otherwise than indebted for many of their annual and family expenses? And do not all know that many farms in those days were encumbered with mortgages? The persons of capital at that time were professional men; they were considered the gentlemen of leisure, respectability and character. These were the halcyon days of the profession, when that class of men monopolized not only almost all the wealth, but the respectability of the whole community. Living under a free government where every man has the full benefit of all his faculties, and can own the land he tills, if by industry he will earn it—within the last few years the mind of the farmer has been directed to the improvement of his condition, and to raise himself by education, intelligence and industry, to a higher, if not the highest rank in society. What is the first step he takes to do this? He wisely frees his slaves, and turns his sons from the taverns, the race-course, and the haunts of idleness and vice, where formerly most of their time was spent—to take their turns at the plow; to sow in season; to work in harvest, and to lay up for him stores for winter. This was a great step, and a thousand blessings have followed its train. He looked upon his condition as a farmer. It was work without profit—labor without reward. What next? He brings into action the thinking mind, and naturally asks himself—cannot the intelligent mind be

called to aid the industrious hands to the improvement of my class, and relieve me from debt and embarrassment?

C. N. B.

—We need not go back to the "long time ago" to see samples of poor farming, but can find it in abundance among those who came from the slave States, where too often the son graduated at the tavern, the turkey match or the raffle. There labor was only fit for the nigger, and the sons must be brought up in idleness though they fed on corn bread and bacon, and were clothed in butternut homespun.

In the south part of this State at this time, there are hundreds of refugee families from the slave States; the most of these live, the Lord knows how—work, they will not. Had we a choice, we should prefer the negro to these grandee gentlemen, who in most cases have left their country for their country's good. All parties agree in the fact that the sooner they leave the State the better.—Had these parties been brought up in industrious habits they would be welcomed as a valuable class of new comers; now the whole population ask how and when they can get rid of them. Farmers from East Tennessee, as a general thing, are intelligent and industrious.

From the Country Gentleman.

Cattle Fastenings.

I have noticed several articles in the *Country Gentleman* discussing which of the several ways of fastening cattle in the stalls is the best, consulting at the same time the convenience of the herdsman and the ease of the cattle. Of course all the different modes have their advocates, and each kind of fastening has its good and bad points.—None are more convenient for the herdsman, or more easily worked, than the stanchions each side of the neck of the animal, fastened with a latch at the top. With this kind, and a raised floor four feet ten inches wide, with just descent enough to let the urine pass off, while the excrements will mostly fall on the offset, cows can be kept quite clean. With ropes or chains cows will crowd forward the length of their tethers to eat; then back up and lie down in their droppings, which, to the milkman, is not very desirable, although it gives ease to the cows.

In tying young cattle by their horns the rope will make an indentation, which will disfigure the growing horn. S. E. Southland, of Jamestown, N. Y., had a patent cattle fastener at the State Fair at Utica, which appeared to obviate the difficulty attending the present stanchions with latches. There are stanchions each side of the neck of the animal, with a latch at the top hanging on a pivot, which allows them to swing forward eight inches when the animal rises, and an oscillating motion to the right and left of six inches each way at the bottom, which had the appearance of relieving cattle very much when compared with unyielding stanchions. The expense of making

them must be more than twice as much as permanent ones, which may prevent their early adoption.

HIRAM WALKER.

Horticulture.

Indiana Horticultural Society.

Through the kindness of George M. Beeler, Secretary, we are in receipt of a copy of the transactions for the winter meeting held at Indianapolis.

Mr. Beeler has presented an interesting report of the doings of the society, and the printers have served it up in good style. We would like to copy a large part of the report, but must be content with drawing a few facts from it. The President's address is an able one and we cannot resist the temptation to copy a couple of paragraphs:

CANADA THISTLE.

"Before passing on to other topics, and lest I may overlook it, I desire to call the attention of nurserymen who purchase their propagating stock of roots, plants, evergreens, &c., at the East, to beware of the *Canada Thistles*. This pest of pests infests, I am told, many of the nurseries of the East to a most alarming extent, who now are sowing it broadcast over the West by sending out trees and plants, especially evergreens with thistle plants and pieces of roots attached, every one of which grow. The bolls containing seed are also sent out in the straw with which they are packed. Beware, then, of whom you buy your trees, etc. Go in person, and see for yourself, and don't touch a tree or plant if you see a single stool of thistles on the grounds. Comparatively few persons in Indiana know what the Canada Thistle is. Those familiar with its character, it is unnecessary to admonish; to others, perhaps, it is sufficient to say that its presence in a neighborhood reduces the value of farms at least one-half, and can only be sold to those not familiar with the villainous character of this worst of all noxious weeds or plants at any price. This pest is regarded with so much horror that legislation is being had in the Canadas and in the States where it abounds, to prevent its further spread. Let this Society do its duty then, by sounding the note of alarm, and prevent its introduction as far as possible into our State.

FRAUD AND MISREPRESENTATION.

It has been said that this was a progressive age. It is essentially so. It is also a 'humbugging' age. There never was a time in the history of this country when there was such a mania for *novelties*. It is a truth that with all their shrewdness and sagacity, the Americans are the easiest people in the world *humbugged*. To say nothing about the deceptions practised with the various other fruits, I will only incidentally, without going into particulars, allude to the unmitigated swindling that has been practised upon the country by the introduction of an endless number of new varieties of grapes, not a few of which have been sold at fabulous prices, when they were not worthy of a place in the forest, from which in many instances they were taken.

I will not undertake to enumerate the frauds practiced—they are well understood by you all—but let this suffice, that of fifty or more new varieties introduced, not a dozen are really acquisitions to the old varieties. But the people are mad—they are crazed upon the subject. They must have grapes, and grapes they shall have, and they can scarcely have too many if they only have the right kinds. But I know of a person who would have made a profitable investment if he had joined our Society, attended our last annual meeting, and donated \$100 to the Society for the information he might have received. However, it is too late for him—he has purchased his information at a much dearer rate. So it is with hundreds of others who are paying the penalty of their neglect. Nevertheless there are others yet to plant. Thousands of acres will be planted in Indiana within the next few years; and the proceedings of this meeting are looked for with interest by many who are preparing to plant quite largely, as well as those who plant but a few vines, to see the drift of the discussions and the varieties recommended for general cultivation. Let us look well to this matter then, and see that we mislead nobody. I think we can with this past year's experience, speak positively in regard to some new sorts that we have hesitated about heretofore.

Very many of the new varieties are equally as good, perhaps, as the older sorts, and ought not to be rejected because they are not better. Others should be cast overboard and the men who introduced them held up to public execration. They ought, in fact, to be indicted and sent to the penitentiary for obtaining money under false pretence and misrepresentation.

But whatever else we do—however anxious we may be to introduce and encourage the growth of all new and valuable sorts, whether of grapes or other fruit, let us not recommend any variety for general cultivation until every doubt is removed. Then we shall have nothing to regret, nothing to take back. We have thus far gone on slowly and cautiously with our recommendations, and with a few unimportant exceptions, none could desire a change that cannot be readily made, if we make the geographical division of the State that has been suggested. And if we go on thus carefully we will establish a list of fruits that will be of invaluable service to the public, besides the satisfaction to ourselves to know that our labor has not been in vain."

HOW TO SECURE APPLES.

Pick from the trees by hand, and put in a basket that is hung by a hook to a branch near you; these are sorted—all the large, perfect ones put in a barrel; the next size of perfect fruit in a second barrel, and the culls go to the hogs or for vinegar.—Apples of a size always sell better than if several sizes are in the same barrel. The barrels are to be laid on their sides instead of the ends, as the pressure is less on them. Some apples need to be kept in rather tight barrels, and others need more air; the Winesap does better in open bins—it is liable to be covered with fungus if kept excluded from the air.

VARIETIES.

The Belmont was highly spoken of—Mr. Nelson would name it the most valuable for a single variety. We have found it hardy, productive and valuable on the prairie, and have planted it largely. Gen. Orr, who is an old orchardist, said:

"I have experimented for twenty-five years in keeping apples, and I believe the best way is to barrel and lay them on their sides. There is little danger of apples freezing if kept dry. They will not freeze when open to the air until the thermometer indicates 24 deg. When my apples are barreled I leave them in a cool place until it is 12 deg. below the freezing point, and then remove them to the cellar. Winesap does better on the shelf, as it needs more air than it gets in barrels. Rhode Island Greening is rather tender, but we cannot well do without it. It is not a long keeper, and the tree should be top-grafted. In making a list for planting one hundred trees, I would begin with Early Harvest and Red Astrachan; then Sweet Bough, as the best early sweet apple. Maiden's Blush is good for drying, is a great bearer and will last as long as any of the fall apples. Fall Pippin and Rambo come next. Among the best is Westfield Seek-no-further. No one thinks of doing without it. Windsap come in after Rambo, and it is in season from that time on till March. The only drawback is that it will wilt if kept tightly headed up. The trees bear too full sometimes.—Rhode Island Greening and Prolific Beauty are my next choice. Newtown Pippin scabs badly, and a large per cent. must be thrown out to make it sell in market; but it can't be dispensed with as an amateur fruit for March, although a person using it in December would say it was of no account. Lady Apple is nice for March and April, but it is very liable to scab. Yellow Bellflower does well with me, and I believe it does generally all over the country, but it is more of an amateur apple, as it is tender and easily bruised, and therefore not good for market. I do not consider an apple so good after having been frozen. Persons must know when an apple ripens to judge understandingly of its qualities. Some people will use their spring apples in December and January, while they are endeavoring to keep their late fall and early winter apples until March and April."

Mr. Lowder, of Hendricks. (In answer to a question.) The White Pippin is perfectly hardy in an orchard where Rawles' Janet has died. I consider the tree and fruit both, as first rate—bears every year and is one of the best keeping and market apples.

Mr. Vancamp. I know trees of this variety which are the best in the orchard and the fruit is the same. It is always of uniform size, free from scab and is a great bearer and keeper."

We have stated, a year or two ago, that our Hoosier friends were planting the White Pippin in place of Newton Pippin and White Winter Pearman. Wherever we have seen the White Pippin it has given the most unbounded satisfaction. The list of apples thus far recommended are:

"Autumn Seek-no-further, Yellow Bellflower, Red Astrachan, Early Harvest, Sweet June, Trenton Early, Benoni, Early Red Margaret, (or red

Stripe of Central Indiana,) Maiden's Blush, Rambo Fall Wine, Belmont, (North of National Road,) Winesap, Jersey Black, Pryor's Red, (South of the National Road,) Westfield Seek-no-further, (North of National Road, Smith Cider, Bawles' Janet, White Pippin, Canfield (for cider,) Cayuga, Red Streak (or 20 ounce apple,) Keswick Codlin, Sweet Bough, Ben Davis (or New York Pippin.)"

APPLES RECOMMENDED.

Summer Rose, Fenley, Porter, Dyer, Fall Queen, Jonathan, Ladies' Sweeting, Broadwell, Winter Sweet, Paradise, London Sweet, Pippin, Swaar, Green Sweet of the West, Indiana Favorite, Golden Sweet, Pickard."

CIDER.

"The Society took up the 'cider question,' and called on Wm. H. Ragan for remarks.

He said that the apples should be of good, rich varieties, gathered and put into open sheds until they are somewhat ripened, and the weather is cool enough so that the cider will keep without too much fermentation. They should be carefully assorted, all rotten and inferior specimens discarded before grinding. He would recommend grinding from twenty-four to thirty-six hours before pressing, as the quality and quantity of the juice will thereby be greatly improved and increased. It should be filtered through several thicknesses of cloth to take out all particles of apple or other substances. Put into new barrels, (none other should be used,) and put away in a good cellar. It will be necessary when it begins to ferment to open a small hole in the barrels to give it air. When it is done fermenting close this hole and it will remain *cider* as long as you keep it in a cool place and air tight.

Mr. Fisher, of Wabash. I don't think cast iron should be used in grinding apples. I always press as soon as ground and strain through straw. The larger the quantity in casks the better it is. Fill full and let it ferment. The time it demands depends on the weather. The bitter will disappear during fermentation. The casks must be always kept full. A cask containing four barrels will work off four or five gallons. In filling up the casks care should be exercised so as not to disturb the bottom. The gas will work off in four weeks, when the cider will be very clear and will keep for two years.

General Orr. I use small, sound, juicy apples and make as late as possible. He uses Winesap and Harrison, but believes Hewes' Crab to be better than either of them. He is not particular about having them stand after they are ground, but generally presses at once and strains through straw. The barrels must be clean and purified by being smoked thoroughly with sulphur; when entirely settled draw off into a clean barrel, leave the bung open and keep it filled up. When it has fermented to suit the taste put in sulphate of lime in proportion of one ounce to four gallons of cider. Leave it a week and again draw it off into a clean barrel, put in two pounds of raisins and eight or ten lbs. of sugar, bung up tightly and leave it until spring, when it is to be bottled. In answer to a question he says the sulphate leaves a slight taste, but the advantages of this method overbalance that. Considers it the best way he has yet tried. Don't like large apples of any kind. The finer the apples are grated the richer the cider will be. Considers it a

wholesome drink and second only to water, especially in warm weather. Uses it freely in the harvest field. It has a tendency to decrease the desire for water, and believes in its use on philosophical principles. It is a common practice in Europe for stage drivers to rub and drench their horses with hard cider or vinegar to induce a less use of water.

Mr. Ragan. My cider keeps through the summer, especially that made from the Hewes' Crab. Some other kinds will not keep so well, as they have not *body* enough. I think Gen. Orr is mistaken in making *juiciness* a requisite for a cider apple, because the very best we have, viz: the Harrison, is decidedly a dry apple.

Mr. Jones, of Wayne.—I once made a barrel of cider from sweet apples in August for immediate use. Only about one-half of it was immediately consumed, and at the end of ten days, on going to the barrel, I found the remainder to be No. 1 vinegar, in point of fact, it was as good as I ever saw.

PEARS.

White Doyenne, Rostiezer, Winter Nelis, Vicar of Winkfield, Bartlett, Flemish Beauty, Seckel, Belle Lucrative, Stevens' Genesee, Julienne.

PEACHES.

Crawford's Early, Crawford's Late, October Yellow, Serrate Early York, Old Mixon's Cling, Old Mixon's Free, Early Barnard, Morris' Red Rarissime, Early Tillotson, Cole's Early Red, Royal Kensington, Druid Hill, Late Heath Free, George the IVth, Smock.

GRAPES.

Hartford Prolific, Diana, Delaware, Concord, Catawba, Herbemont, Clinton.

GRAPES FOR WINE.

Catawba, Concord, Clinton, Delaware, Herbemont, Ives, Madeira, Norton's Virginia.

CHERRIES.

Early May or Early Richmond, Belle Magnifique, May Duke, Late Duke, Early Purple Guinge, Reore Hortense, Governor Wood, Belle de Choisey.

STRAWBERRIES.

Wilson's Albany, Triomphe de Gand, Iowa or Washington.

RASPBERRIES.

Purple Cane, Catawissa, Ohio Everbearing, Doolittle's American Black Cap."

We should have been pleased to have met our Hoosier friends but the cold weather and blockaded trains interposed too serious obstacles to attempt.—Ed.

The Apple Crop of Monroe County.

As many of our readers are not aware of the extent and importance of the apple crop of this county, and the vast trade in this fruit, we have taken considerable pains to glean the statistics from the dealers and shippers in this article. It has been a work of much labor, and has taken several days of inquiry and research. We think the figures in the main will be found correct. It is possible that the names of a few of the dealers have been omitted, although we have endeavored

to procure all in the city. It is estimated that over 100,000 barrels of apples have been stored for winter use, and perhaps 50,000 more kept for spring sales. This, with those sold, makes a total of 525,000 barrels of apples grown in this county during the present year. Worth the princely sum of \$853,120. The entire apple crop of this county for the past year, has probably reached a value of not less than \$1,000,000! The crop has been sold, a large portion of it, in New York, Philadelphia, Baltimore and Washington. Large quantities have also found markets in Boston, Hartford New Haven and other New England cities. Forty or fifty thousand barrels have been shipped to Montreal, and several thousand barrels to Toronto, thus affording an immense freight traffic to the Ontario line of steamers.

The prices realized have been quite satisfactory to the producers, and much above the average of former years. A large proportion of the early fruit realized \$2 per barrel. The price of winter apples has ranged from \$1 50 to \$1 75 per barrel. The heavy crop and ready demand for apples has stimulated the barrel trade, and our barrel manufacturers have received high prices for all they could manufacture. At times the demand for barrels has far exceeded the supply, so that shippers have been obliged to procure barrels elsewhere. Large lots of the latter were brought from Canada. The price of barrels has ruled from 33 to 50 cents each, with 40 to 45 cents as the average. The whole number of barrels of apples shipped from this county is 375,500. We doubt if any county in the United States can show a greater amount of sales. In fact we think Monroe county beats the world, not only in the extent of her nurseries, but also in the production of fruit.

The Orleans Republican of Albany, gives the total sales of apples from the county at 278,000, and challenges comparison with any other county in the State. The sales from this county exceed those in Orleans county nearly 100,000 barrels. The garden county of the State is yet ahead, and defies competition as a fruit growing county. Her agricultural wealth and resources, the fertility of her soil, and the vast extent and variety of her productions cannot be exceeded in any section of the country.—*Rochester Democrat*.

—The above gives us some idea of the value of fruit growing in connection with farming. There are few counties in the State that cannot make more or less in this way, and in most of them cover larger profits, as the price is much better than at the East.—Ed.

How I Protected my Peach Trees.

In the fall of 1862 I had eight fine thrifty peach trees, four years old the coming spring. I had taken great pains to "head" them low, (not more than a foot from the ground,) and to "shorten-in," so in fact they were "regular pyramids," about five feet in diameter at the base, and eight feet high. Now, peach trees in our vicinity are called poor property, not having borne any fruit for the last ten or twelve years. I had observed that my trees were "literally covered" with fruit buds, and having heard and read a great deal about protecting peach trees, I concluded to protect mine.

I had heard from some source, that to lay them down and cover them with straw or hay, was an excellent method, so I would protect mine in accordance with this plan; the way I did it is as follows: I took my spade and dug a semicircular trench eighteen inches deep about two and a half feet from the tree, cutting the roots that were in the way. I then cut under towards the centre, severing all the roots to that depth, (18 inches,) on the trench side. I then pulled the tree over and fastened it flat on the ground one half of the roots unmolested, except being bent to conform to the new position of the tree. I laid a heavy stick of wood across the branches to press them down flat, and then covered three or four inches deep with damaged prairie hay. The roots that turned up out of the trench I covered with earth thoroughly, then a coat of hay over that, so that the tree was covered entire. The way I protected the others, excepting one is as follows: I put a rope with a noose on one end, around the outside branches, and drew them up to the centre of the tree, into as close a bunch as possible, and tied them in this position by means of crushed sorghum stalks, wet so that they could be tied. I then covered them about two inches thick with wheat straw, from the ground to the tops laid on similar to thatching, and bound with crushed sorghum stalks. The other one I left exposed. I accomplished all this myself in half a day. Now for the result. I had expected a rich return of luscious fruit the coming autumn, but alas! I was sadly disappointed. When the balmy air and genial showers of spring had begun to awaken sleeping nature into active life, I went forth and divested them of their strawey coverings, expecting in a few days to see them "covered" with rose tinted promises of luscious fruit. Judge of my surprise on uncovering them to find the bark on the branches shriveled up and apparently half dried. The buds were so dry that I could pulverize them between my finger and thumb. The branches had lost their flexibility, and remained after being disengaged, in nearly the position that I had bound them. The one that I laid down appeared "all right" when I uncovered and set it upright, but it never opened a blossom nor started a leaf. So I have the seven *protected* trees all *dead*, and the *unprotected* one *alive* and doing well. It had a few blossoms but no fruit.

There, readers, you have my experience in *protecting* peach trees. Will some kindreader inform me why they died under this *treatment*, and oblige a young farmer?

North Henderson, Mercer Co., Ill. MARION
In Country Gent.

SCARCITY OF NURSERY STOCK—THE ADVANCE IN AGRICULTURAL PRODUCTS.—A writer in the *Genese Farmer* says that a nurseryman from the West was recently in his office, who came to Rochester to buy peach trees. He said that the nurserymen here could not supply him. They had no more than they needed for their own customers. He offered \$100 per thousand for them, but they were not to be had. A few years ago they were bought for \$40 per thousand. Cherry trees are equally scarce. The nurserymen anticipate lively sales the coming spring.

As to the effect of the war on agricultural and other products, the same correspondent says:—I

contended in the *Genese Farmer* for Sept., 1861, that if the war continued two or three years, prices would rapidly advance. Some of my friends laughed at the idea. But "history repeats itself," and it would be well for us all to heed its lessons. I may be pardoned for feeling a little proud of that article, written when everybody thought we were on the brink of ruin, and farmers sold their products for less than the cost of production. I was offered corn that year in Bloomington, Ill., for 9 cts. a bushel, cash, or for 10 cts. in "trade!" At Vandalia I was offered eggs at $3\frac{1}{2}$ cts. per dozen, and "the barrels thrown in!" Potatoes were offered at 5 cts. a bushel, but found no purchasers!

Apiary.

From the Country Gentleman.

Which is the Best Bee-Hive.

MESSRS. EDITORS.—As quite a number of the bee-keeping readers of the Co. Gent. have addressed to me various inquiries on the subject of bee-culture, I wish to avail myself of the use of your columns, not so much to relieve me from answering interrogatories severally, as an opportunity of answering the *general* inquiries, that all who feel an interest in the matter may judge for themselves.

One very general inquiry has been made, and that is as to the character of the "hive that I use, or whose patent hive is the best." I have used a variety of hives contrived by different individuals, and am acquainted with about all of the patented features of the various hives. If the beekeeper expects to realize from this branch of rural economy the greatest profit that it affords to skilful management, he cannot dispense with the use of movable comb hives—in fact it is the only means by which he can excel in this interesting vocation.

The movable comb frame, the discovery of which renders to apiculture the only advantage—in the *arrangement* of hives—gained during the present age, is the invention of the Rev. L. L. Langstroth. Simultaneous with this invention, and in America long before it, fruitless attempts at rendering practical the moveable comb theory, was had in Europe; but to Mr. Langstroth are the public indebted, and to him justly belongs the honor of having given *utility* and practicalness to the *principle* of moveable comb hives.

To those who are acquainted with patent right affairs, I would say, challenging any and all for *proof* to the contrary, that all hives having movable comb frames, no matter what may be the style, size or peculiar features of the frame or arrangement of the hive, it is substantially a "Langstroth hive," and that irrespective of other claims to novelty or patents granted, because it is for the *use of the moveable comb system*, that is the essential feature covered by his patent, and no two patents are ever issued to different persons for the same, or *covering* the same invention. Patents are granted for *additional* improvements on former inventions, but such subsequent issue, however, could not grant the right to vend or use what was embraced or covered by the original and all prior patents.

Strange as it may seem to the uninitiated, the hive that was awarded the "premium" at the N. Y. State Fair '61, '62, and '63, inclusive, is a gross

infringement on, and a palpable counterfeit of the Langstroth hive and patent. The contriver of said premium hive, claims to different patents for it, and a third patent pending, none of which relate to the use of movable comb frames, nor does either of those several patents allow or grant him the right to use or vend a movable comb frame of any sort or kind in *his* hive or in conjunction with his patents. At those fairs, however, as elsewhere, the movable comb frames were displayed as the prominent merit of the counterfeit hive.

But more strangely still may it appear when the indicative fact is known that though this hive *was* awarded the several premiums, no *one* of our several distinguished scientific aparians, among whom is Mr. M. Quinby the prince of practical aparians in this country, either commend it, use it, or countenance it in any way other than with contempt.

Mr. Quinby, who designed the *best* hive for and in general use prior to the introduction of the mob frame, and himself the author of a very excellent treatise on the art of bee-keeping, approves of no movable comb hive other than the Langstroth hive with some slight modification of his own.

Mr. Quinby is the only person who has added any utility to the "movable comb hive." Much difficulty has been experienced in using the movable frame, for the reason that bees do not uniformly build each card of comb correctly and separately within each frame. To remedy this, very many devices, several *patented*, have been tried with varied success. This obstacle, however, is so completely removed by so simple a method discovered by Mr. Q.'s ingenuity, as to entitle him to share in the honor of giving to the public the eminently important advantages of the moveable system. His method is to elevate the rear end of the hive, thus inclining the frame lengthwise several degrees. This should be done when the bees are first placed on the stand after being hived, and remain in such position until the combs are begun the whole length of each frame. The writer has tried and proved this method in his own experience, therefore he commends it.

Thus much has been said on the *arrangement of hives*, not with the intention to favor or prejudice any inventor or invention, but merely to aid beekeepers who have not given the subject due attention, in a knowledge of the *facts*, to the end that all may be able to distinguish without inquiry what is valuable and what is worthless.

The writer hopes to continue in a future issue, the subject of hives. C. J. ROBINSON, *Richford, N. Y.*

Poultry.

A Short Chapter on Poultry.

It has been proven by many an experiment that the keeping of poultry on a large scale cannot be made profitable. When men come to count on the profits of a few hens and calculate to receive the same ratio of profits from three to five hundred, they will be disappointed, for we believe there is not an instance on record where these expectations have been realized, and there is a good and valid reason for it.

You may provide for your poultry everything generally accounted necessary, such as grain, meat, lime, ashes, good shelter, regular feeding, &c., &c., and yet they will not do well. Poultry pick up many a thing of which a poultry yard, even of one or two acres, soon becomes destitute. Most varieties are also pugnacious, more particularly the males. Confining many hens in a poultry house even with the utmost care on the part of the owner, will breed vermin. Hens will likewise quarrel about their nests, no matter how plenty of nests there may be, and so on to the end of the chapter.

As far as our experience and observation goes, we think from ten to twenty hens a sufficient stock in the spring. Should you live any great distance from town or market, it is not profitable to market eggs after a very few weeks in the spring; they will hardly pay the cost of transportation.

The number of hens mentioned above will furnish all the eggs a family ought to consume, (for although very nutritious, they are not accounted very wholesome if partaken of every day, and as some families are wont to do every meal, and prepared by frying in fat,) and also furnish sufficient for incubation. We do not consider it difficult to raise a hundred chickens in a season and still have eggs enough for an ordinary family, from less than twenty hens. You should allow one cock to about twelve hens; you should also change your males often.

We like the cross of the Cochín, Shanghai or Brama with our common barn-yard fowls. Such a cross are not so pugnacious, do not scratch so much in the garden, and are every way more domestic. They are also better nurses than the pure of the above named breeds, attain a greater weight than the ordinary kinds, and we think the meat is more juicy than the former.

Turkeys can be made profitable where they can have the range of a piece of road way or pasture and meadow. Three hens and a gobbler are better than a greater number. The black and bronze varieties are esteemed hardiest and best. They will mate about February or March. Take the first litter of eggs and set under common hens; the turkey hens will soon lay again; now let them have all the eggs they can well cover, and set.

When the young are hatched, you should so divide those hatched by the common fowls as to be taken care of by the turkeys; confine the small chicks in a small pen, made of a few boards, on a well covered grass plat, and change the pen every few days. They should also have shelter in case of storm. Feed bread crumbs and hard boiled eggs, chopped fine. Avoid corn meal unless first baked and soaked in milk. Young turkeys are very tender, while the grown bird is very hardy. In pasture or meadow we think them very useful, because they feed on and destroy innumerable insects, while for "Thanksgiving," "Christmas" or "New Years," they are a proverb and a by-word, and not bad to take. They are almost the only bird America has contributed to the kitchen of the world.

To those who desire to keep geese, we recommend the "Bremen" variety, because they are white, which adds to the value of the feathers, and are also larger. For ducks, the Cayuga is domestic, large and of good flavor for the table.—*Rockford Register*.

Miscellaneous.

Farming in California.

No finer farms, orchards and vineyards can be found in our State, than those of Napa county. The fine farm of G. C. Yount, Esq., is one of the most interesting in the county, from the early associations of this venerable pioneer. We have often spoken of this place, its orchard and vineyard, the fine flouring mill, and all its interesting associations.

Oak Knoll, too, is one of the prominent features of this county, one of the finest locations, and a farm that, had the proprietor been permitted to live, would have been a model farm.

Oak Knoll Farm contains 1600 acres as fine land as "lays out o' doors." The orchard contains 30,000 trees—a splendid orchard. The amount of packages of fruit sent to San Francisco, to Nov. 1, were 8,000. Seven and a half tons of dried fruit were also put up at Oak Knoll this season. The farm produce for the large dairy stock is 360 tons hay, 50 acres of wheat, 70 acres of oats. The wheat yielded about thirty bushels to the acre, oats fifty bushels.

The dairy stock numbers 60 cows at present, including 25 milkers. Some 150 pounds of butter is made a month, and the yield of milk, besides supply of farm, etc., is 30 gallons a day. There are seven full blood Ayrshires; four of these were imported, three as the increase. The stock is in good order, the farm and orchard doing as well as can be expected under the misfortunes and embarrassments that have befallen it.

The farm is under the charge of Mr. Andrew Bouton, the foreman, to whose care and attention it is indebted for its present order.

When at Oak Knoll, on both occasions, we visited the tomb of Mr. Osborn. There beneath the majestic oaks is the grave of him recently so full of life and hope, even amid the storm clouds of this world, that were howling around him. We stood at his grave; a neat white paling marked the spot. Within its inclosure the hand of endearing affection had spread the earth with emblems of eternity; the grave was beautifully covered with green, and upon the head of the grave was a cross made of ivy and the berry of the snow drop. It was, and ever will be beautiful in our memory, this grave of the pioneer, hallowed by the hand of affection, endless as eternity.

As we gazed upon this spot, and remembered the orphaned children, and that widowed one, as we looked upon that grave so tenderly guarded by her care, it seemed to say:

Ever green shall thy memory be,
And I will bear my cross.
My life was thine. I lived for thee,
Now daily mourn thy loss.

Among the farms of Napa which we visited, was that of O. Steinback, Esq.—a farm of 275 acres, principally a grain farm. He has also some fine stock. Mr. S. located here in 1859, has a very pleasant residence, with fine scenery from every point, and with every desirable surrounding to make a

prosperous farm, and a "happy home," save one, and that the jewel of all.

We noted with great pleasure the completeness of the management of this farm, as it was a proof that Mr. Steinback was a farmer from innate love of it, understood what a farm should be, and had managed so as to make it a prosperous one. As an evidence that Mr. Steinback loves his business, we state what we saw, and think it proof of good farming.

He has a large barn of 150 feet long, a large spacious hay house, capable of holding 200 tons, stables for horses and stock; blacksmith, carpenter, and harness-maker's shops, each separate; also buildings for harvesting implements—of these there were every kind, cleaned and put away in order, with all kinds of extra wheels, etc., to be ready when wanted; added to all these is a smoke house.

On this farm was introduced the first steam engine in California. In the granary there was a corn sheller, barley grinder, and every fitting and useful tool and implement.

The residence was raised from the ground to protect it from dampness. This home has a nice library, with the papers of the day; and hanging in the library is a handsome photograph of the farm and buildings.

The garden is small, but there is no hand to care for the garden of a "bachelor." He has four hives of bees, which are emblems of industry.

The stock of the farm was all of extra quality, including oxen, horses, etc. The work-horses were specially fine. He possesses a noble Gen. Taylor and Cheatham colt, and others of superior excellence.

The pleasure we experienced was great, and this was increased by the cordial kindness and hospitality extended in our young bachelor's home. We sincerely trust, as this is the ruling year for the fair ones, that they will lay siege, or perhaps, they being of the gentler sex, rather than storm the castle, they can take it by a better way, for it is a noble farm, nobly managed, and highly creditable.

We have more to say of Napa farms and farming.—*California Farmer.*

Rhubarb Wine.

JAMES SEELY writes from Caroline, Tompkins County, as follows: "Is it not a fact that rhubarb wine, so far as profit is concerned, is established? If this wine possesses comparatively no intrinsic merit, and yet from its cheapness and comparatively healthful nature supplies a common want without practically interfering with grape-wine manufacture, should it not be recommended as likely to discourage the use of drugged and poisonous liquors? Is not the fact indisputable that its merits incite a demand equal to the constantly and rapidly-increasing manufacture, at prices leaving a munificent margin of profit to the producer, and will it not be some time before people familiar with the whole matter will believe it a speculative juggle?"

"It seems to me the best practical test of quality that the consumer is satisfied. But it may be urged that, to the educated palate of the best wine judges, compared to the best qualities of grape-wine, it is a nauseous, worthless compound.

"The question may arise, however, whether they

are the best judges of the general want. There are other considerations than mere taste, which go far to decide the choice of the public, even if all possessed a like accurate discrimination.

"The difference of cost of grape and rhubarb wine is an item to which no American is insensible. Add to this the not infrequent depravity and morbidity of taste which enables a large class of people to endure the preparations called lager-beer, ale, &c., and grape-wine is put at an exceedingly embarrassing discount in the common market.

"Now, I have no pecuniary interest in the matter, not having engaged in its manufacture or sale; neither am I interested in grape-wine manufacture pecuniarily. I say this because the seeming haste used in the Club in condemning it tends to excite a suspicion that jealousy of a rival business, rather than sound judgement, was paramount.

"I cannot, think, however, that any just ground for jealousy exists, but rather the contrary."

JOHN G. BERGEN—I recollect that Mr. Robinson was one of the earliest advocates of the culture of rhubarb for wine, and that he presented a bottle to the Club, as American sherry, which was drank by several who professed to be good judges, and pronounced excellent, and that he then astonished them with the assurance that it had not a drop of grape juice in its composition. I should like to know if he has changed his opinion?

OLON ROBINSON—No. And, so far as I am concerned, Mr. Seely is mistaken in supposing that I have condemned it. I have only condemned the dishonest representations of knaves who sell roots of "the wine plant," representing it as something peculiar, and the only variety that will make wine, which they know to be a lie. All of the cultivated varieties of the common garden "pie plant" (rhubarb) will make this kind of wine and one about as good as another. One sort may afford more juice than some other, and for this it is probable that Cahoon's seedling, which is a coarse, strong-growing sort, would give the greatest yield per acre. And speaking of seedlings reminds me that it is not necessary to go to the expense of getting roots to establish a rhubarb plantation for wine-making. Buy the seed and grow the plants, and if you do not get "Linnaeus" or "Victoria" you may get a seedling equal to either, or better than Cahoon's Downing's seedlings, or at any rate you will get cheap plants that will afford juice and save you from being cheated in buying "wine plants," which, perhaps, you already have growing in your garden.

Of rhubarb plants, a beverage can be made to take the place of cider, in sections where apples have entirely failed; as is the case in Northern Vermont; and also where grapes cannot be ripened for wine, and in such localities, I recommend people to plant rhubarb, but do not be cheated by wine-plant peddlers. They are humbugs not the plant. *N Y Tribune.*

Cornish Mode of Raising Early Potatoes.

Sprouting the seed is now universally practiced wherever early maturity is desired. This is done in the following manner: An airy light room or loft, with windows to be closed in severe weather, has tiers of shelves filling up all its available space

These are often, from lack of room, too close to each other, and a foot from shelf to shelf may be given as a good average distance. On these shelves the seed is carefully placed, each on its end; one sack weighing two cwt. will thus require about thirty square feet of superficial space. With a due supply of light and air, and the occasional removal of any tuber showing signs of disease, they may remain till planting time comes. The great object is to secure strong, healthy and colored shoots, about two inches in length; the neglect of ventilation and a proper amount of light producing weak, colorless shoots liable both to injury in removing them, and to decay when planted. The earliest crops are now invariably grown from sprouted seed, and they are grown a good fortnight in advance of former years when autumnal planting was the rule. —*Journal of Horticulture.*

Why Farmers should Write for Agricultural Paper.

A correspondent of the Canadian Agriculturist says:

We have examples in the *Country Gentleman* and *Albany Cultivator*, and the *Genesee Farmer* of very successful and widely read periodicals, attracting much attention in Canada. It cannot be said that our Canadian periodical has not on its pages a staff of able and responsible editors, and we therefore inquire what is the matter? Every reader of the American papers referred to, knows that one of their leading features consists in the contributions by farmers themselves from all over the United States; illustrating their occupation? giving their experience; making and answering inquiries; criticising and commenting on the various practices of each other; enjoying communications; establishing acquaintance; creating interest in each others' welfare, and leading branch of industry. Their journals are a ready source of correspondence between the leading farmers of the country, who comprehend that nothing is lost by imparting to others valuable knowledge derived from experience. There is much no doubt that is crude thrown together in this way, but the result is a great deal that is valuable and instructive.

How I Killed the Botts.

In life's experience we are inclined to remember and speak of our good success, but more silent and less willing to mention or publish our failures; while if made known the unsuccessful experiments might often benefit others. I am going to tell you how quick I killed the botts, which attacked my kind servant "Bay," as the team was fetching us from the northern part of Vermont to the center, some years ago.

On the road Bay had a severe attack inwardly, evidently caused by this insect. An ostler claiming skill in horseology kindly offered to remove them; and firstly he gave him about half a pint of the spirits of turpentine from a bottle; then, after an hour or so, a quart of molasses and milk was administered, the contents of which was poured down the nostrils. She obstinately declined taking any more good things at the mouth. This soon relieved the uneasiness and evident misery which the animal was placed in.

Soon after my arrival home another severe at-

tack occurred. Of course I sought and applied the same expedient. The poor distressed beast refused the dose by the mouth, making strong resistance. So we poured the spirits of turpentine *through the nostrils.* Instantly the blood commenced flowing as from an artery or large blood vessel uncapped, causing the death of the horse in less than ten minutes, *and in due time the botts also died.*

EL TEJON, California.

S. W. JEWETT,
In Co. Gent.

—This is doubtless the only sure cure for the botts: that is, first kill the horse and the botts will die. Colic is often mistaken for the botts, or the attack may be a slight one. Any medicine that will kill the botts will be pretty sure to kill the horse, as the botts will live in almost all kinds of liquid poison. We think very few horses die of the botts, though they often suffer from too large numbers of them in the stomach.—Ed.

From the Country Gentleman. Income Tax.

The farmer's income tax is a puzzle, and shows among other things, the inexcusable ignorance of farmers themselves in regard to necessary accounts. They do not seem to be able to give an approximate guess at the profits of their business for a single year. And the attempts of the assessors to direct them in making up their accounts in many cases only perplex them the more. There is a strange discrepancy in the taxes imposed upon the farmers everywhere, some paying five times as much as others, of apparently equal income.

This is not to be charged to any unfaithfulness of the assessors, or generally to any disposition on the part of the farmers to shun this tax, for I am unwilling to believe that they are less faithful in the duties of citizen than any other class. It is a new thing, and the mistakes connected with it cannot be corrected at once. It may be that this tax will not be levied in this manner very long.

There are some errors which ought to be corrected if the tax is to be continued. It can scarcely be expected that the assessors or those who give directions to the deputies, should be so well versed in farm accounts as to be able to dictate to the farmer how he shall make a statement of his income. What propriety is there in deciding, as in the case mentioned in the *Co. Gent.*, that the farmer shall be supposed to have paid no more than \$15 a month for labor, when perhaps he has paid \$18 or more? or that the allowance for board shall not exceed \$6 a month, when the actual allowance is \$8?

I believe that most assessors so interpret the law as to make no allowance to the farmer, as a part of the expenses of working his farm of any labor done by a member of his own family, or by any female he may have employed in his family. This is often wrong, as he may have employed females exclusively in the dairy, or members of his own family may have performed labor which he would otherwise have hired, and which is truly a part of the expenses of working the farm, paid in the clothing and other expenses of his children, as if paid in the wages of a stranger.

It is an inextricable inconvenience that the returns must be made up to the first of Jan., which is not the beginning of the year with the farmer's business. His grain is unsold and unmeasured, his stock is a part of it unsold, and his feed unconsumed and unmeasured. It is impossible for one living on a farm to keep his accounts perfectly correct, to make a just return of his income, dividing the year at that point. With many it is only a confused guess. They should be released from such a dilemma if possible. The farmer's year begins the first of April. If he has kept his account as he should, it is a very easy thing to give an exact statement of his income. And if he gives the income of the year from April 1, 1863, to April 1, 1864, it will be much more nearly the true returns for the year 1863 than could be made out on the 1st of January, 1864. I am sure my income for the year ending March 31, cannot vary much from the income of the year ending Dec. 31. I know what the former is, and I safely assume them to be the same. It is my surest method of finding my income for 1863. If farmers will adopt this plan, they may escape endless confusion, and give a more satisfactory return. If this tax is to continue, the law should be altered in this respect.

The simplest manner of showing the increased value of stock, &c., is to take an inventory at the end of the year; any increase in value compared with the inventory a year before should be set down as a part of the products of the farm, and any decrease in value is to be placed among the expenses. So of hay, grain, &c. All the products of the farm consumed by the family are to be estimated at their cash value. It would not be unjust for the farmer to be taxed on the value of the rent of his house; he is taxed for the value of the fuel cut from his own land, and for any wood and timber which he may sell, if it does not exceed the annual growth of his timber land. I think it would sometimes be wrong to tax the product of a sale of timber or wood, a man may sell a lot of timber which has been growing fifty years. This is not the annual product, it is the capital itself, almost the whole value of the property. It is the annual value which the law seeks to tax, and not the accumulated capital of fifty years.

The law itself is not unjust to farmers; the misinterpretation of it by assessors, and the want of proper accounts by farmers themselves, work very great inequality.

It gives a rather favorable look to the business of farming, that correct accounts expose those who keep them to larger drafts by the income tax.

Is not this a proper subject for the attention of the New York State Agricultural Society to propose a system of taxation which shall become uniform and make the imposition of it just and equal? No doubt the department would give respectful heed to any suggestions made to it by a committee appointed by the State Society. Does not the interest of the farming community demand of the Society some such action?

AMENIA.

N. REED.

—The above has a value aside from the income tax. Last month we published the instruction of our assessors on this subject, and trust our farmers will have their account books kept accordingly.

Something that Farmers Need.

Every farmer needs a nail box, well stocked. He should have, at least, nine sizes. The following table will show any one, at a glance, the length of the various sizes, and the number of nails in a pound. They are rated, "3-penny, up to 20-penny." The first column gives the number, the second the length in inches, and the third the number per pound. That is:

3-penny...1 in.	557 na.	12-penny...3 in.	54 na.
4-penny...1½ in.	356 na.	20-penny...3½ in.	38 na.
5-penny...1¾ in.	232 na.	Spikes...4 in.	16
6-penny...2 in.	167 na.	Spikes...4½ in.	12
7-penny...2¼ in.	141 na.	Spikes...5 in.	10
8-penny...2½ in.	101 na.	Spikes...6 in.	7
10-penny...2¾ in.	63 na.	Spikes...7 in.	5

From this table an estimate of quantity and suitable sizes for any job of work can be estimated.

A farmer's nail box should be divided into ten compartments, one of each sized nails and one for spikes. It need not be large because it is only intended for jobbing, and have a suitable sized nail for all purposes, always at hand. It should have a good strong handle like the bail of a basket. Two or three gimlets, an awl or two, and a nail set should have places in the nail box, and of course the hammer. Another tool box should contain two saws, a plane or two, a drawing-knife, several files, punches, cold chisel, etcetera.

Stalls for Horses.

The proper width of a horse's stall is four feet. Length from partition in front nine feet; deduct one and a half feet for crib, and we have seven and a half feet from crib to rear of stall. For the first four feet of the rear end of the stall cut two-inch hard wood plank into three and one-half inch strips, and lay them five-eighths of an inch apart, spike them down at each end. The remainder of the floor in the stall should be laid tight of oak plank. The floor under the animal's fore feet being tight, prevents the flow of any liquid manure forward. The interstices in the rear floor conduct it back to where it flows into an iron gutter, through which are drilled inch holes to carry it below. Back of the gutter (which is three and one-half inches wide) is an iron plate four inches wide and half inch thick, to take the wear of horses hind feet; both pieces of iron to be headed into the plank so as to be level with the bottom of the upper floor should not pitch over one inch. The better way is to have the forward floor level, and the rear or strip floor pitch half an inch.

The floor in rear of cows' stalls should be dropped, or the one upon which they stand raised six inches, in order to keep the animals clean. The floor upon which they stand should be just long enough for them to stand upon, without stepping down on the floor behind. From the crib, five and one-half feet is long enough for small cows, and one-half to seven for large ones, is about right. These floors to be level.—*Ex.*

The Value of Dead Horses.

Some people will no doubt be astonished to learn that large fortunes have been made every year since

the commencement of the war, out of the dead horses of the army of the Potomac. The popular idea is that when Rosinante yields up the ghost, she is buried in some field, or left to moulder into mother earth in the woods somewhere. Not so. She has made her last charge and gnawed her last fence rail, but there is from \$20 to \$40 in the old animal yet. A contract for the purchase of the dead horses of the army of the Potomac for the ensuing year, was let a few days ago, to the highest bidder, at \$1.76 per head, delivered at the factory of the contractor. Last year \$60,000 were cleared on the contract, and this year it is thought \$100,000 can be made on it. The animals die at the rate of about fifty per day, at the lowest calculation.

At the contractor's establishment they are thoroughly dissected. First, the shoes are pulled off; they are usually worth fifty cents a set. Then the hoofs are cut off; they bring about two dollars a set. Then comes the caudal appendage, worth half a dollar. Then the hide—I don't know what that sells for. Then the tallow, if it be possible to extract tallow from the army horses, which I think extremely doubtful, unless they die immediately after entering the service. And last, but not least, the shin-bones are valuable, being convertible into a variety of articles that many believe to be composed of pure ivory, such as cane-heads, knife-handles, &c.—*Army Correspondence.*

Stirring the Soil—Cultivators vs. Plows.

The gradual extension of steam power in the cultivation of the soil in England, has tended to produce sounder views as to the advantages which result from stirring the soil by cultivators or grubbers. At one time it was deemed essential for the luxuriant growth of a grain or bulbous crop, that the soil should be inverted. This is now proved not to be necessary; on the contrary it has been shown that on retentive soils the crops produced on lands which have been stirred but not inverted, are more abundant than where the soil has been turned over by the plow. An intelligent correspondent residing in Buckingham, who has the best opportunities of ascertaining the results produced by the use of cultivators compared with plows, draws attention to this fact in his report for that county. It is highly probable that, as the steam engine is more generally brought into requisition in cultivating the soil, that the implement most commonly used will be a cultivator or grubber.—Those farmers who are preparing land for wheat—whether the previous crop had been beans, potatoes or turnips—could undertake experiments to ascertain the difference of produce from one part of a field stirred by a grubber or cultivator, compared with that produced on another portion of the field, which has been stirred by the plow.—The question is one of such great importance, that it is to be hoped several farmers will conduct experiments, not only in the preparing of land for wheat, but for other grain crops, and report the results.—*North British Agriculturist.*

Harvesting in Japan,

Another portion of the crop was harvested in a most curious way, which I think must be peculiar

to Japan, for I have neither seen nor heard of it in any other country. On the 10th of June—so says my journal—fires were observed blazing all over the country, and dense masses of smoke were seen rising from every cornfield. This time it was not the burning of rape stalks, for they had all disappeared, having been converted into their elements of earth and air, the former of which was already entering into another form, and was supplying food for the summer crops. It was the bearded barley which was now going through the crucible, the object being to separate the heads of grain from the straw and awns. This was done in the following way:—The grain having been tied up in small bundles or sheaves; is removed to a convenient spot on the edge of the field. When the burning is to begin, the workman takes a sheaf in one hand, and with the other applies fire to the upper or grain end of the sheaf. It immediately ignites, the awns go off in a blaze, and heads of grain snap from the stalk and fall to the ground. Lighting another sheaf, the workman throws the first away in a blaze, regardless apparently of the worth of the straw, and so the operation goes on. As the beardless heads fall to the ground the fire goes out, leaving them slightly browned by the operation, but with the grain unharmed.—*Fortune's "Yedo and Peking."*

INTERESTING TO WOOL GROWERS.—A correspondent of the Free Press says that a bit of mercurial ointment about the size of a pea, will cure the itching of the fine-wooled sheep, which has been so troublesome the past season, and caused them to pick themselves, and injure the looks of the fleece very materially. He warrants it to cure in three days without the least injury to the sheep.

BEAUTY IN STOCK has no invariable standard. In the estimation of some it results from small bones and close, compact frames; while others consider that structure the most perfect, and therefore the most beautiful, which is best adapted to the use for which it is destined. With such beauty is relative. It is not the same in an animal designed for beef and in one designed for the dairy or for work.—The beauty of a milch cow is the result of her good qualities. Large milkers are rarely cows that please the eye of any but a skillful judge. They are generally poor, since their food goes mainly to the production of milk.—*Jennings cattle and their diseases.*

Blackberry Syrups.

Joseph C. Thomas, Chaplain and reading agent of the army of the Cumberland; writing to the Sanatary commission last summer says:

Of all the blackberry preparations, I believe the test of experience shows the vast superiority of the blackberry sirup. I give in brief the recipe for making it:

"Take two pounds of the bark of the root, cleanse well, add suitable quantity of water, boil two hours, pour off the liquid, add more water, thus continue to boil and pour off until all the strength is extracted, strain, add all the boilings together, simmer to two quarts, strain, add four

pounds white sugar, cool, add half pint French brandy. Take a table spoonful three or four times a day, eating sparingly."

Editor's Table.

BAKER & PHILLIPS - - - PUBLISHERS.

M. L. DUNLAP, Editor.

SPRINGFIELD, ILLINOIS, MARCH, 1864.

MARCH is called the month of winds, of frost, of sleety storms and deep mud. To these charges it must in part plead guilty, yet March has many redeeming qualities, many prominent virtues that endear us to its long days, though filled with no little amount of fickleness. It is in this month that we lay the solid foundations of the season's operations, both on the farm and in the garden; nor can we allow the orchard to go unheeded—pruning and planting, plowing and sowing is the order of the day, to the full capacity of the muscles employed. The stormy days of March are all needed in the wood house, the barn or the cellar.

CAST IRON ROLLERS AND CORN PLANTER.—The advance in pig iron, in coal and in labor is so great that we fear that these useful implements will not be on sale at such prices that the farmer will feel warranted in buying. A six section roller, twenty-two inches in diameter and seven feet four inches long, (the length for two rows of corn,) will weigh six hundred and seventy pounds, add to this one hundred and thirty pounds wrought iron, and we have eight hundred pounds of iron. This at eight cents a pound would cost \$64; to this must be added, ten dollars for frame and smith work, making the cost seventy-four dollars. Pig iron is worth about three cents a pound, and it is probable that the rough castings can be furnished at six cents a pound at the foundry at wholesale. Will some of our foundry men put us right on this subject, if out of the way in our estimates? Allowing the cost of the roller to be \$50, and the planter \$15, which is liberal, we can have a roller and planter at \$65, allowing the dealer fifteen dollars, the machine completed will be only \$80.

We are assured that several of these will be made for this year's crop, when if they succeed as anticipated, the present system of corn planting will be changed.

REV. J. KNOX—GRAPES AND SMALL FRUITS.—The card of this establishment will be found in this number of the FARMER. An account of a visit to the grounds of Mr. K. may be found in a previous number. From what Dr. Warder says, the public

may be assured of well grown plants, as well as those true to name, both points of no small importance.

BURSON'S GRAIN BINDER.—We have numerous inquiries in regard to this binder, how it worked last season? and if they are again in the market?

Since the State Fair we have heard nothing in regard to the matter. At the Fair Mr. Burson assured us that all the machines sent out that proved defective, would be made to do good work, which we presume will be the case. We have faith in the ability of this machine to do good work, but of the cost of wire per acre and the liability to get out of repair we know nothing. The fact that little is said in the papers in regard to an implement of this kind argues nothing in regard to it, as many manufacturers of implements depend upon canvassing for sales rather than advertising. The system of a free canvassing of the merits or demerits of implements in the columns of our agricultural journals has had too much to do with this state of things. The public have become disgusted with this indiscriminating paid puffing, that it is of little value. The result is that some of our best implements are little advertised.

HUSKING CORN.—Our readers have doubtless heard of big days' work in corn husking, but the following, will perhaps be found to be the largest of them all. We give it place because we think it the largest day's work of the kind on record, and because we also think it true.

Daniel Oyler, a farmer residing seven miles west of the city of Champaign is the hero of the corn field, and until a man is found to beat him must be entitled to wear the husker's belt.

Mr. O made a bet of his time against a yoke of oxen with a neighbor, a deacon in some church, that he could husk one hundred bushels of corn in twelve hours and put the same in cribs in good order. The rows of corn were seventy rods long; at each end of the rows cribs were made for the convenience of handling the corn. At 6 o'clock, on the morning of October 26th, 1861, he commenced work, attended by two men to see that no cheating was practised, but who in no way were to assist him. In husking he only husked one row at a time, and that on the left hand side of the wagon. His team was trained to the work, and moved along at the word of command without his touching the lines. At the end of the row the corn was shoveled into the crib. At five o'clock and fifty-five minutes P. M., he quit work, being five minutes before the time.

Here was near twelve hours constant work for the time spent in eating was very limited.

On measuring the corn by the two referees it proved to be one hundred and eighteen bushels, and when sent to market was sold for and weighed one hundred and seventeen and 27-70 bushels, after feeding the two teams their noon meal, while loading. It was sold in the ear at seventy pounds to the bushel.

Mr. Oyler took the oxen home and kept them several weeks, but the Deacon became conscience stricken on account of betting contrary to the rules of his church, and demanded the oxen. Mr. O. supposing the law to be on the side of the Deacon gave them up for a paltry consideration.

The bet was not a bet after all, as the Deacon was to give the oxen provided that Mr. O. husked 100 bushels of corn in the twelve hours. We hardly know which to most admire, the muscle and persevering skill of the husker, the honest simplicity of the winner in quietly giving up his hard earned reward, or the cool, calculating meanness of the Deacon in demanding back what he had honestly given for labor had and done him. We would have given the name of the Deacon, but do not wish to admit the name of so contemptible a person to our pages.

NEW USE FOR RATS.—It is said that a company of Frenchmen, after making a careful survey of the West, have decided on Chicago as the best point for the rat business. The *Journal* of a late date says:

THE NORTHWESTERN RAT-HIDE COMPANY.—It is rumored that a company of Frenchmen has been formed in this city for the purpose of catching all the rats possible, curing their skins and exporting them to Paris, to be used in the manufacture of gloves. For years, what is called "French kid" gloves have been made from the skins of these animals, caught in Paris and other parts of Europe, but the demand being greater than the supply, it has become necessary to extend the rat-catching arrangements to this country, and no finer field than Chicago for such operations can possibly present itself.

The *Cairo Democrat* in reply to the above says:

We had supposed that Cairo could beat the world on rats. We are too modest, however, to quarrel with our Chicago neighbors upon this point. Chicago is the rat headquarters.

Should the stock of rats fall short in both of the above rat-holes, we might give the rat-catchers some employment in this county.

GRAPE CULTURE AT BLOOMINGTON.—Dr. Schröder, the well known German horticulturist of McLean county, informed us at Springfield, that six years ago he planted the first grape vines at Bloomington. Now in that immediate vicinity there are *fifty acres* planted to the vine. The Dr. confidently predicts that in five years McLean county alone will beat the famous plantations of Hermann, Mo., in the extent of its vineyards. Put McLean county and Dr. Schröder on the record. We appre-

hend he is a true prophet in this respect.—*Prairie Farmer*.

CULTURE OF TOBACCO.—We hear less in regard to the tobacco crop intended to be planted this spring than usual. We think less attention will be given it than the crop of last year, on account of the want of hands, and the discouragements of last years frost.

BROOM CORN.—Large fields of this will be planted this spring in this county.

THE FEBRUARY COLD AND FRUIT TREES.—We can not perceive that the cold snap, injured the fruit trees in the least. The peach trees, as before stated, are looking better every day, and we trust will come out in better shape than most people anticipate.

TRANSACTIONS ILL. HORT. SOCIETY.—W. C. Flagg, Sec., has a card in this number, announcing the Transactions in readiness.

To the untiring energy of the Secretary are the people of this State under obligation for the prompt appearance of this work. Every reader of the *FARMER* should send for the whole set, if he has not already obtained them. Make up clubs and get them by express. You cannot afford to do without them.

DOMESTIC SWEETMEATS.—It is a singular fact that many people who know how to preserve everything else, can't preserve their tempers. Yet it may easily be done on the self-sealing principle. It is only to "keep the mouth of the vessel tightly closed."

GRAPE CULTURE.—In reading the agricultural papers of the day one would be led to suppose that only two interests now absorb the rural population—sheep growing and grape culture. The former is confined mainly to stock farmers, while the latter pervades all classes.

The propagation of new, hardy sorts of superior value has had much to do in producing this state of things. The people have had a taste of grapes, and knowing that they can be cheaply and certainly grown, are disposed to invest largely. There is not a house in town or city that may not have its grape vine, not a south wall that could not be trellised with rich clusters from the middle of August to the late frosts. We no longer need depend on the sour and seedy Clinton to ensure an early crop, but have the hardy and productive Hartford Prolific, the Crevaling, Logan, and other superior early sorts. The desire for a good, hardy, productive and delicious white grape is also supplied in the Cuyahoga and Taylor's Bullit, while the Concord, Delaware, Diana, Norton's Virginia and Herbemont, bring up the main crop for winter use and for wine.

OHIO WOOL GROWERS' CONVENTION.—The annual session of the Ohio Wool Growers' Association was held at Columbus on the 5th and 6th Feb. Col. S. D. Harris presided. Mr. Greer, from a special committee, reported the following resolutions:

Resolved, That we petition the Congress of the United States to so amend the Internal Revenue laws as to impose a tax upon dogs, with a view of protecting sheep from the depredation of dogs.

Resolved, That washing is in itself injurious to the sheep, is of no advantage to the wool, and is only made necessary by the present custom of wool buyers, and it is highly desirable that a reformation be effected.

Resolved, That the existing tariff on foreign wool is inadequate to the protection of American wool growers, upon the same footing as American manufactures.

These resolutions were discussed at considerable length by Lieut. Gov. Stanton, Judge William Lawrence, and were finally adopted, with the following additional one, offered by Hon. Columbus Delano:

Resolved, That a committee of three be appointed to prepare a bill to be submitted to the Legislature for promoting the interests of wool growers and for protection against dogs, and that said committee memorialize the General Assembly in favor of passing said bill.

The following gentlemen were elected as officers of the Wool Growers' Association:

President—R. M. Montgomery, Youngstown, Mahoning county.

Vice President—John Gurney, Alexandria, Licking county.

Secretary—J. Park Alexander, Akron, Summit county.

Treasurer—L. D. Harris, Cleveland.

Directors—S. S. Matthews, Outville, Licking county; E. Messenger, Marion, Marion County; John Leary, Litchfield, Medina county.

—Two important points are settled in the above. One the necessity of a dog law to protect sheep owners, and the other the useless and unhealthy practice of washing sheep. In New York they have a dog law, a per capita dog tax which is used as a fund to pay for sheep killed by dogs. Suppose there is a thousand dogs in the county, these pay a dollar each, making a thousand dollars, which is placed in the treasury for the purpose of paying damages. Now suppose A has twenty sheep, five of which are killed by dogs, a commission is appointed to assess the damage; when the amount is paid out of the dog fund. If we had a similar law, nearly every farmer would keep a small flock of sheep, while the flocks of worthless curs would rapidly disappear under the dollar tax.

At the next session of the Legislature an effort must be made for a similar law.

NEW MODE OF PRESERVING APPLES.—At the meeting of the State Horticultural Society at Alton, some person presented an apple in a good state of preservation, claimed to be preserved by

a new process. It was first handed to Dr. Warder for examination, who tasted of it and passed small bits to the members, but no sooner was it tasted than the melting tit bit went on the floor. In the first place the apple had been dipped into a thin solution of gum arabic, but the person fearing this might not prove effectual, gave it an additional coat of copal varnish; the varnish had penetrated the fruit, not only preserving it, but imparting the varnish to every part of it in a remarkable manner. No formal vote was taken on the value of the new discovery, but from the looks and actions of members, the conclusion might be drawn that they would not recommend it on a large scale.

PURE MILK.—At Paris the inspector stops the milkmen at the city gates, examines their cans, and if he finds any that have been watered, kicks them into the gutter. How would that work in our American cities?

MEDICAL EXAMINER.—The January and February Nos. of this valuable work are on our table. It is published in Chicago at \$2. Geo. H. Fergus is the printer, and must be reckoned among the oldest typos of Chicago, in fact our acquaintance dates back almost to the village of Chicago; while the editor, Dr. N. S. Davis, has grown grey as the city has extended her streets. It is pleasant as well as profitable to thus renew old acquaintance by these monthly visits.

One of the correspondents of this work says: "It has already been stated that those who are not sufficiently intelligent to read and write are most liable to disease." And the writer goes on to say that exhilarating mental influences are valuable prophylactics in the army.

Of course all our physicians take or ought to have this work, nor will it be found useless in large families, where the application of some simple remedy may often save a long spell of sickness.

ILLINOIS COTTON.—From the *Carlyle Union Banner*, we learn that one hundred and twenty bales of Illinois cotton, the product of last year, will be shipped from Carbondale, this season. All that has yet reached market brought eighty cents per pound. The lint is fine, silky, and white, though somewhat shorter than Mississippi cotton.

SEED CORN.—But little of the crops of 1863 is fit for seed and farmers are planting that of 1862.

NAVY BEANS.—A large amount of these beans will be planted, for army and navy purposes. The use of beans are no longer confined to the Yankees as the western people consume a large amount. Of the navy bean we have two sorts, the small bean that is very early and prolific and most estimated and the large bean less reliable but occa-

sionally promising a large crop. We prefer the small sort, and take great pains to keep them pure and unmixed with any other.

DRIED APPLES.—Wm. H. Rogers of Williamson, Wayne County, N. Y., made 7,000 pounds of dried apples out of the crop of 1863, which he sold at 10 cents per pound, making more money for that one article than is realized by many farmers for all their salable products.—*N. Y. Trib.*

Persons wishing to economize in clothing their children, will do well to try metal-tipped shoes. Children invariably wear out their shoes at the toe first. Metal tips never wear out at the toe, and a pair of tipped shoes at an additional cost of a few cents, will more than outwear three pairs of the same quality without them.

For the Illinois Farmer.

Forcing Principally by Sunheat.

In conversation with a gentleman from the East on the subject of protecting trees, he remarked that his father, a citizen of Worcester, Mass., had repeatedly ripened peaches in winter; cost him ten dollars apiece; beautiful fine specimens to look at, but in quality not as good as an apple—ten thousand dollars for a green-house was an item. His father had concluded he could not grow peaches.

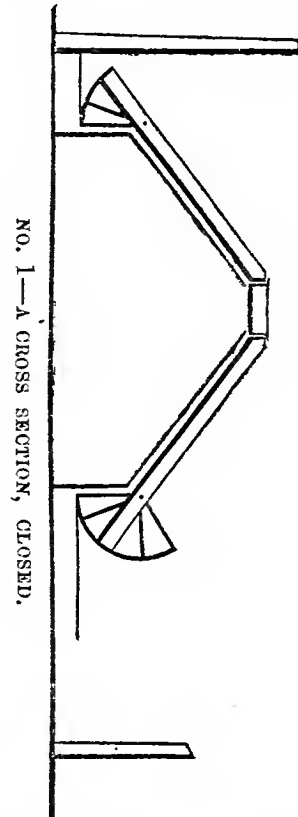
To produce choice fruits with certainty and cheaply, has always been regarded an object worthy of the best minds in horticulture, and engaged the highest genius and skill of practical gardeners.

Geologists inform us that the earth is a molten mass of matter, pervaded by the most intense heat, except near its surface, which has, in time, become a hardened crust by the natural process of cooling. The rate of increase of temperature descending from the surface, indicates that its solidity extends only a distance of a few miles interior, and that the constant radiation of heat from the earth is mainly supplied from its internal fires.

When our north pole, in friendly attitude, inclines in summer to receive the sun's rays, they operate in conjunction with this original and never failing source of bottom-heat, and so increase the temperature of the earth's surface, and its superincumbent atmosphere, that the whole vegetable world is forced into vital action, again to rest when it presents the "cold shoulder," and blows its icy breath over our cherished gardens and fields until we measure frost in the soil of formidable thickness. But the Ice-King has his limits, and below the frost it is warm, then warmer, as we descend.

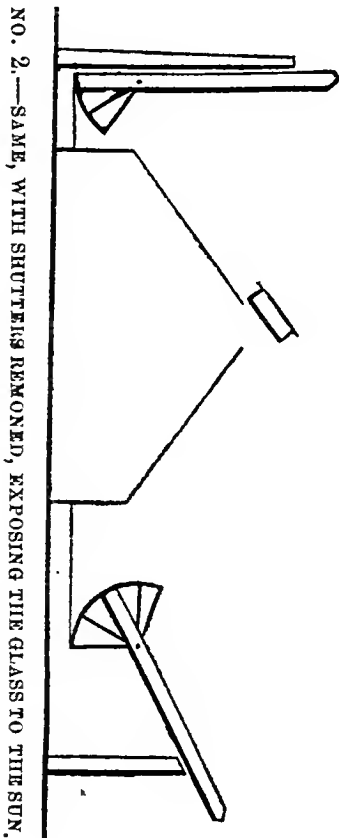
Advantage has been sought to be obtained in forcing, by sinking pits below ground, and by placing lean-to houses against bank walls, not so much to avail of subterranean heat, as to exclude frost; and the question arises, whether this subterranean heat may not be appropriated to positive results, and economically applied to the purposes of winter forcing of fruits and vegetables.

The following illustrations are designed to show the application of substantial and efficient shutters to forcing-pits, or other glazed structures:



The house may be supposed to be fourteen feet wide, eight high, with rafters eight feet long. The shutters eight feet high and eight or ten inches thick, should enclose, in their construction, a perfectly shut air-chamber, and close tightly over the glazed structure, as shown in the first cut.

The house should extend east and west, and the north shutter, when opened to a perpendicular position, is fastened to substantial posts, and thus forms a back-wall eleven feet high, the rocker-rails being one foot from the ground, which should be mulched with a suitable covering one or two feet thick. The south shutter is, when open, also attached to posts, and turned over sufficiently to admit the full action of the sun's rays upon the house, as represented in the second cut. The base of the shutters, below the center of the circle is weighted with sand or other suitable material, until they are balanced on the centers, when they may be opened or closed with the greatest ease and facility. The ends of the house are closed with similar shutters.



The objects sought to be obtained by this mode, are, so to enclose and protect the house that the temperature may be suffered to decline naturally during the night, without endangering the plants—to economize fuel, simplify the management and lessen the cost of heating apparatus.

If cisterns, or subterranean air-chambers are used in connection with this kind of enclosure, they will increase the volume of air enclosed, without otherwise increasing the dimensions of the house; and whenever the temperature of the air in the house approaches forty degrees, its density will exceed that of the air below, and will circulate and become warmed in passing through the lower chamber, the temperature of which can hardly be reduced below forty degrees, thus affording security against frost.

Writers on the subject of forcing, all agree that the injuries resulting to plants from high night-temperature, which is unavoidable in severe climates, subject to severe vicissitudes and sudden changes, are among the most serious and difficult to obviate. We are advised to "leave on a little air all night," with so many cautions and counter-instructions, which, put together, amount to *just as little as possible in the very coldest weather*, when the greatest fire-heat is required, and, consequently, the *most ventilation needed*.

To apply this house to the purpose of forcing fruit economically, put up the frame and shutters, and plant the trees in the border at the base of suitable

trellisses, and after training the first season, close the shutters over them until the next spring. Continue the training, and allow a few specimens of fruit; in the fall again enclose for the winter, and the third summer a moderate crop may be realized. Thus we secure a perfect condition in the trees, and raise "peaches without glass." As soon as the trellisses are filled and the trees in condition for a full crop, and for forcing, cover the frame with hot-bed sash, and when desirable to start the trees open the shutters daily to the sun, and close up securely at night. A common stove and pipe, or simple flues, will be necessary in cold, cloudy weather, and in extremely cold nights; but there are many warm days in winter when the sun would afford all the heat wanted.

The following directions, from the *Gardener's Chronicle*, for the management of peach trees in pots, indicate that the peach requires much less heat in forcing than the grape:

"The trees started in December should be commenced with the temperature of about 40° by night and 45° by day. After the first fortnight the temperature should rise to 45° by night and 50° by day, with an increase of about 10° with sun heat. At the end of another fortnight, the temperature should rise to about 50° by night and 55° by day. The night temperature should not exceed this until after the fruit is set. This is the rock on which so many beginners suffer shipwreck. They forget that the peach must be flowered under a comparatively low degree of temperature; they are frightened to give air, especially if the air be cold and frosty; they keep a close, warm atmosphere, and the results are that the petals all drop off without any fruit setting. Whilst peach trees are in blossom, air must be admitted abundantly by day, and a little also at night; precautions must of course be taken in severe weather to place some material over the openings to break the cold draughts of air. So long as the temperature is kept above 35° the blossoms are safer but only keep a close atmosphere and a warm temperature, and there is a certain end to the crop. This is a point which cannot be too much insisted on, as everything as regards the crop depends on it. By admitting plenty of air and keeping a night temperature of from 45° to 50°, if the wood was, previous to forcing, well ripened, a much greater quantity of fruit will set than is ever needed for a crop. When the fruit is all set and about the size of large peas, the temperature should be raised to about 55° to 60° by night, and 65° by day, with an increase of sun heat of 10°. Air should be freely admitted. The night temperature should not exceed 60° until the 'stoning' is over, for this is a very critical period in peach-forcing. After this the temperature should be raised to 65° by night, and 70° by day. Peach trees will stand a high temperature after this. When the fruit is approaching maturity, which, when the trees are started in December, and the foregoing treatment attended to, will be about the beginning of June; it should have all the exposure to light and air possible. Trees treated thus will be in the

best possible condition for forcing next season. The above mode of treatment will apply to the trees started at any subsequent period; and to have a succession of fruit, a fresh batch should be started every three or four weeks.'

If trees are started the last of January, instead of December, in this climate, the average temperature, from sun heat, will increase after the first month, in something like the proportion required.

When under this system of pot-culture in orchard-houses in this country, it is recommended to remove the trees to the open grounds, we remove the sash from the house, and use the shutters if occasion requires.

The advantages of planting directly in the border, are aimed to be contrasted with pot-culture, in the following quotation from the above authority, in 1862:

"GLASS HOUSES FOR FRUITS.—I am sure that all gardeners must bear testimony to the great stimulus which 'T. R.' has given to his particular branch of horticulture, and to the indomitable perseverance with which he has continued to fight for a number of years for his 'orchard houses,' and for his peaches and nectarines 'in pots.' 'A look into their roots,' he says, 'is like a look into the book of Nature, most valuable to a reflective mind.' I accept the cultivation of fruit trees in pots exactly in this sense. But as a matter of pounds, shillings and pence, and of supply, I must leave my potted pets to keep company with my geraniums and orange trees, where, as objects of beauty, they shall have my attention still. That fruits of all kinds can be grown in pots there can be no doubt; but when a constant and substantial supply is required for table or for market, of the finest qualities and in the greatest quantity, then there is no question that you must decidedly plant out. If my opinion is worth anything, I recommend glass houses of the lightest possible construction, and trees planted out for supply. In this way there will be no disappointment, and if you wish to grow in pots, let it be understood that it is for the pleasure which such a fancy conveys, and not for profit."

That the peach and all other choice fruits can be grown on trellises, trained on espaliers, to great advantage in many respects, and in substantial quantities for market purposes, there can be no doubt, and it is believed the product of espalier-trees will pay good interest on the investment required, embracing the cost of shutters for preventing injury to the trees or their blossoms, from autumn, winter, or spring frosts, even in seasons when it has to compete with local crops in the open ground—the early varieties being thus carefully grown and sheltered may be easily marketed, say ten days before the product of open-culture, and in seasons of failure, from any of the common casualties, a reimbursement of the whole capital invested may soon be realized; and when we add the advantage of the practicability of forcing these fruits, and bringing to market full crops, at a sea-

son when they always command very high prices, with but little more than the simple cost of a glazed covering, the system appears worthy of the capital of commercial fruit-growers, and the enthusiasm of amateurs.

We have just passed through another scathing winter ordeal. The record stands thus:

DATE.	TEMPERATURE			INSIDE.			R'MK'S
	Morning.	Noon.	Evening.	Do'bleb'ds & saw-dust	F'n's fill'd with leaves	Single b'ds & cistern.	
1864. Feb. 15	.....°	.....°	4°	.....°	.....°	.....°	Mild.
16	—11	—4	—4	10	—4	10	Windy
17	—13	—4	—4	8	—6	6	"
18	—2	8	—1	8	2	12	"
19	4	40	—31	10	4	14	Mild.
20	28	.....	.....	24	28	32	Clo'dy

This trial confirms my confidence in the efficacy of shutters for the purpose they are designed to answer.

This cold period, from its commencement throughout, was attended with a high, piercing wind, and the shutters filled with sawdust were found, on examination, to be empty about one foot down from the top, and also from the middle partition which runs horizontally, leaving the joints open between the boards on both sides; consequently admitting considerable circulation of air through the enclosure, which was prevented in the side shutters by the snow, in the former cold period; but the doors closing the ends, which were constructed in the same manner, had the joints open as far as the sawdust had settled down, during the severe trial early in January.

The single board structure, the snow being all off, and the joints being more or less open, was unnecessarily ventilated. The leaf frames showed more efficiency than we expected, considering their imperfect construction, and the effect of the late dry weather in shrinking their contents, and their imperfect packing, still more loose. It will be noticed that the temperature in this house rose from six degrees below zero on the morning of the 17th to two degrees above on the morning of the 18th, the outside temperature being still two degrees below, not having been above in the day previous, showing plainly the effect of the internal radiation from the earth, even when its surface is frozen.

The buds of the plum, and of the Richmond and Morello cherry, which were all perfect and uninjured after the severe and protracted cold of the fore part of January, are badly damaged by thirteen degrees below zero in the late trial. In the plum we cannot find a live bud, and the cherries

are more than half killed. This result we attribute to the occurrence of extreme cold later in the season, the sap having commenced circulating freely in the mild weather since the middle of January.

JAMES WEED.

MUSCATINE, Iowa, Feb. 24, 1864.

—Above we present the subject at length in regard to shutters, for the protection of peach and other tender fruits. Should the plan prove feasible on trial, in a pecuniary point of view, we can then apply it to the growing of figs and other semi-tropical fruits. Dr. Weed does not give the estimated cost of this kind of structure, nor the best mode for their construction—whether in short sections or extending the length of the house.

During the past winter we have seen the need of shelter for our green-house, to guard against sudden changes. On one occasion, at nine o'clock in the evening, the weather having been very mild through the day, was only two degrees below freezing, the ordinary fire was made, but at daylight the mercury was 4° below zero and two or three hundred pots frozen up and the plants mostly dead. Shutters would have prevented any such disaster, and on all occasions would economize heat. The illustrations will show how the shutters are applied,—Ed.

The Weather.

THERMOMETER IN THE OPEN AIR.

Day of Month.		7 A. M.	2 P. M.	9 P. M.	
1864.	February.....	1	36	38	36
"	".....	2	36	36	28
"	".....	3	24	34	38
"	".....	4	37	48	38
"	".....	5	36	40	36
"	".....	6	35	38	32
"	".....	7	34	42	36
"	".....	8	26	34	24
"	".....	9	20	30	28
"	".....	10	16	30	30
"	".....	11	30	48	46
"	".....	12	26	36	30
"	".....	13	26	48	48
"	".....	14	32	43	33
"	".....	15	35	48	30
"	".....	16	— 4	7	3
"	".....	17	— 2	7	0
"	".....	18	4	16	10
"	".....	19	6	30	24
"	".....	20	31	46	42
"	".....	21	38	45	35
"	".....	22	45	60	44
"	".....	23	41	54	38
"	".....	24	33	54	44
"	".....	25	38	46	34
"	".....	26	34	48	38
"	".....	27	42	52	40
"	".....	28	30	32	24
"	".....	29	22	28	26
Means.....		27	39	31½	
Mean for the month.....				32½	

February, like January, has startled the farmers with its sudden changes and sharp frost. On the night of the 15th, the mercury was at 30°, only two degrees below freezing, towards morning it went down rapidly, and stopped at 4° below zero. Green-house plants suffered severely, for the fires had been slackened during the warm spell, and this sudden change occurring at a time of night when all were snug in bed could not be warded off.

We have not been able to detect any injury to trees in either the orchard or nursery.

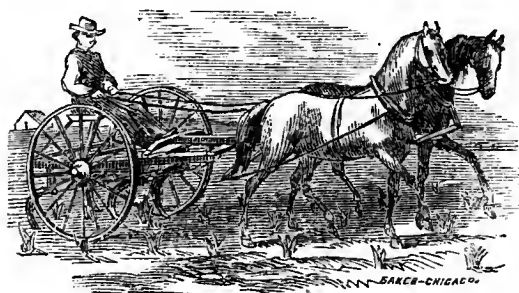
In our own grounds the injury to trees by frost is very light. The last year's growth of peach and pear are somewhat nipped. The Lawton blackberry is killed to the ground, and our improved blackberry has the tops severely nipped. The purple cane and black cap raspberry look uninjured; unprotected grape vines have their fruit buds more or less killed. Winter wheat and rye look well thus far, as we have had little heaving of the surface soil

We trust that fruit trees will come out better than generally anticipated. Some very nervous people have cut down their peach trees, just as though the same work could not be as well done after the spring growth had fully settled the extent of the damage. But over sanguine people must have their ups and downs, and hence are not the safest to be trusted with the orchard

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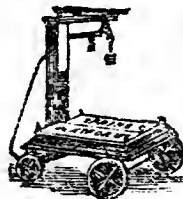
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THE ILLINOIS FARMER.

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NO. 4.

The Illinois Farmer,

DEVOTED TO THE

FARM, THE ORCHARD AND THE GARDEN,

PUBLISHED BY

BAKER & PHILLIPS,

SPRINGFIELD, - - - - - ILLINOIS.

M. L. DUNLAP, Editor.

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April.

With a steady progress the sun mounts the southern sky, the heat is gradually increased and the buds that had swelled or bursted into tiny leaves the past month, now appear in half dress, while the vernal Flora begins to spring up along the garden borders.

The spring wheat and barley have been sown, the grass and clover are springing up, the last of the flax and the oats are in the hands of the sower and the teams are busy for the crop of corn, tree planting is continued with an renewed vigor, for the expanding leaves begin to admonish us of flowers soon to come; the vanguard of spring is

past and we are now immersed in the full tide of its rapidly increasing calls for more active and unceasing toil. It is no time to play the laggard, for if we neglect our duties now, summer will make not up the defect, nor autumn give us the overflowing garners.

The *spring fever* is often fatal to our gardens, and leaves our orchard sites bare of trees; it permits the house to stand in the glare of the summer heat, as though more heat the better; it compels its subjects to neglect the garden borders, and the thousand conveniences that make up the comforts and pleasures of home.

If you have the fever, break it at once; occupy all your leisure in the garden, the orchard or the house grounds, and it will at once disappear. Plant the small fruits, the vegetables and the flower seeds that you may be pleased in summer, and rich the whole year round.

While the denizens of the city are busy heaping up fortunes which they one day hope to enjoy in the country, let the farmer heap up comfort as his wealth expands, and thus enjoy from day to day the real pleasures of life.

Who would be idle?—who would wish to rust out, or be loaded down with mold and canker? Rather keep bright with well directed industry, and cheerful with pleasant surroundings. As we begin the spring, so may the

summer prosper us and the autumn crown us with due reward.

Culture and Varieties of Sorgo.

Sorgo has been introduced into this country over ten years, and yet the best mode of planting and culture has not been reached, nor has it been decided to the general satisfaction what varieties are of the most value.

In giving our views on the subject, the reader will bear in mind that it is from an imperfect stand-point that they are taken. This is not to be wondered at, for after more than two hundred years' experience in corn culture in this country the subject is not fully mastered, and further improvements are anticipated. It has taken twenty years to educate the farmers on the prairie in the true system of growing spring wheat, and even now only the advanced classes fully grasp the idea.

Flax has been grown time out of mind, and yet the enquiry comes from all quarters for the best mode of culture and time of sowing. Under such a condition of things we may well be excused from giving any dogmatic formula in regard to the culture of sorgo, or the best varieties to be planted.—That ten years' experience has laid down and established some facts, all must concede, and to these it is the duty of the cultivator to turn his attention, and to be guided in his operations, if he would be successful.

It is evident that sorgo must occupy no small space among the staple crops of the industrious North. Thus far it has proved its ability to make an excellent sirup for the table, when refined, and in its raw state, equal to Louisiana plantation for cooking purposes, while many people are sanguine

that it will prove a profitable sugar making plant. Though of this we really know little as yet, as most of the statements made in regard to it have been more for the purpose of selling some particular kind of seed at a high price, rather than to report a veritable fact. That sugar can be made from this cane, has been demonstrated in a small way, but the reported *tons* of it have never appeared in the market, and the most charitable conclusion to be arrived at, is that it has been used up in the family. The chemists have not concurred in its value, or fully agreed in regard to its sugar making elements. The close relationship between sugar, gum and starch, baffles the chemist's art, and we are left for real facts to what nature may yet demonstrate, rather than to the laboratory.

What we know in regard to its saccharine properties, is that it makes a valuable sirup, and we have yet to learn in regard to its value for sugar, for it is safe to say that, thus far, we have no practical method by which to reduce the sirup to sugar, notwithstanding we have numerous patents for the purpose, and advertising statements innumerable. It may, therefore, be safely challenged, that out of the tons of sugar claimed to have been made, not a single barrel has ever been put upon the market. If we are mistaken in this we trust that some generous-minded citizen will put us right.—We are a little nervous on this point, from the fact that several thousand dollars was paid for seed last year, that was supposed to possess in a high degree this sugar making quality.

Under the name of sorgo, we have the Chinese sugar cane and the African Imphee. The former is uniform in its

general appearance, while the latter is divided into several sub-varieties.

The Chinese has less disposition to granulate, or rather contains more of the uncrystalizable sirup than the Imphee. In its growth it is more disposed to sucker, grows tall and slender, and is the most liable to be blown down by high winds.

Of the Imphee we have the Neezeana, Oomseana and Red Cane, or Boomvana. The Neezeana, or White Cane, is the earliest. The Oomseana, or, as it is sometimes called Otahitan by some speculators in cane seed, is the next in order, followed by the Red Cane. Besides these we have several sub-varieties, all of which it would be as well to throw aside.

At the Sorgo Works, at St. Johns, in Perry county, of which mention was made in the March number, four hundred acres are to be planted this spring by one person. This is to be divided as follows: Two hundred acres Neezeana, or White Cane. This cane is very early; the growth is less vigorous, yet it yields remarkably well, not perhaps so much to the acre as the Red Cane, but it has this advantage: that it can be worked up before the other is fit to cut. For this reason so large a proportion is to be planted.

The next in order is the Oomseana, known also as Black Cane or Otahite, nearly one hundred acres. Less of this would be planted had Mr. Nason a full supply of the seed of the Red Cane.—Enough of this will be planted to make up one hundred acres of these two varieties.

It is claimed that the Red Cane is the most vigorous and productive, and likely to supercede all except the early variety named above. It is said to

stand up against the most severe prairie winds, which, in the late canes, is a great desideratum, as we have some severe gales during the months of September and October. One hundred acres will be planted to the Chinese cane.

VALUE OF THE SEED.

Last year Mr. Nason planted two hundred and fifty acres, one hundred and ninety-five of which was the Chinese, fifteen Oomseana and forty-five of Neezeana. The planting was done, from the first week in April to the 18th of June, a period of over two and a half months.

The crop was rolled after it came up, and some of it after it was six to eight inches high, with the most decided advantage. The Neezeana was ripe the 1st of September, or at the time of the first frost, as was also forty acres of the early planted Chinese, and which had been planted sometime in advance of the former. The frost of August 30th damaged the whole crop, while that of September 18th destroyed over one hundred acres, which twenty days more would have so matured as to have made fair sirup. Thirty acres was so injured by drouth, being of the late planted, that it was not cultivated at all.

The frosted cane was cut up immediately after the frost and shocked for feed, and makes a superior fodder. The Chinese stood the frost much the best, making the best sirup and ripening the seed, although the leaves had all been killed by the frost, thus proving it to be the best for the more northern planters.

Of the cane worked up, that made five thousand gallons of sirup, over five hundred bushels of first quality of seed was saved. This seed is used in part for planting, but the most of it is being

fed to working teams, and is considered as valuable, bushel for bushel, as oats for this purpose, while the frosted, immature cane is fed in place of hay and oats. Teams thus fed are in fine order and have every appearance of doing as well as those fed on hay and oats.

The cost of the crop, including rent of land at four dollars an acre, was about ten dollars. The average yield was twenty gallons of sirup and nearly two bushels of seed. Estimating the sirup at sixty-five cents per gallon, and the seed at the same price per bushel, this crop, which came near being a failure, shows a respectable profit.—Here is four dollars an acre rent and four dollars profit to the acre.

Previous to the past season but little use has been made of the leaves or seed; now both are found valuable.

THE LEAVES.

If these are stripped and laid on the ground to cure they become worthless, but if put at once into stack or barn to cure, are equal, if not superior, to Timothy hay; the whole value depending on the mode of curing. When sown for fodder and cut at the time of heading out, it is also considered very valuable.

TIME OF PLANTING.

Seed that has laid on the surface of the ground during the winter, comes up early and makes the best stand. It is therefore reasonable to suppose that the fall preparation of the ground and planting will answer an excellent purpose, if not proved to be the very best. The shell or outer covering of the seed is hard, and if planted in its dry state in rather dry soil, will be tardy in germinating. Soaking the seed for spring planting is therefore advisable, unless planted very early in the season.

There is no danger of the seed rotting near the surface; it should, therefore, be covered very lightly and the earth pressed on it with a roller.

If planted in hills three feet and nine inches apart, as is usual with cane, a dozen seed should be put in each hill, otherwise there will be an abundance of suckers. Some plant three to four seed, putting the hills about eighteen inches apart in the row, and the rows as above stated.

HARVESTING.

In harvesting various plans have been pursued, but that which is best now in use, is a machine that cuts the cane by horse power and deposits it in bundles for loading. The tops are cut off and the leaves stripped by hand either standing or at the mill. A machine is patented to cut the cane, strip off the leaves and do the topping, at the rate of six acres a day, by the use of two horses and one man. Should this expectation be realized it will materially lessen the amount of labor required, but we have little hope that it will be so perfected as to be of much value to the incoming crop.

For sirup, the Louisiana cane can never compete with the sorgo, especially that used in its raw state. Labor will always be much cheaper here than in the lowlands of the south, among the swamps and bayous of the sea level.—The cost of food for both man and animals is here less than half that of the sugar plantations; and although a less quantity is produced per acre, yet the yield per man or the net cost per gallon must be less. Plantation molasses has been sold at about 20 cents per gallon before the war, but that was also before it became a necessity among all classes of people, and the price had gradually

augmented by reason of a largely increased consumption, and it will be a long time before it will again reach such a low figure.

If Mr. Nason's figures are correct, that the vinegar will pay for manufacturing, with the exception of cost and interest on the mill, we shall certainly have a cheap sweetening.

The use of automatic planters, two-horse cultivators and machine for cutting, to say nothing of other improved implements, the sorgo crop is placed on a good, prosperous foundation, and must occupy a position only second to that of hay and corn. Already numerous steam works are being erected at prominent points to work up the crop.

Notwithstanding the early frost there is plenty of ripe seed in the center and south part of the State, and no one need pay interested seedsmen double prices for good seed. Some of these worthies are offering to sell at fifty cents a lb. or twenty dollars a bushel, when four to five dollars a bushel for the new sorts, such as Neezeana and Oomseana might be considered a round price. No large amount of the Red Cane can be had at any price, but an abundant supply will be had next season, when its value will have been more fully tested.

Grape Growing and Wine Making.

The N. Y. Tribune, wishing to post its readers on the above subject, directed its western correspondent, Dr. N. C. Meeker, of Dongola, Union county, to visit prominent vine-growers for the purpose of arriving at the facts. The Doctor has faithfully performed his duty, having visited Cincinnati, Herman and various other places, requiring several thousand miles of travel and weeks spent in the investigation. We would

like to give the article entire but for its length, which occupies several columns of the Tribune:

At Des Moines, Iowa, James Smith, long **la** ge y and successfully has propagated the Concord grape and so far as I know has been most instrumental in giving it notoriety in the West. He has always raised good vines, some of which, if permitted, would bear the first year. At various places on the Mississippi, particularly at Warsaw and Quincy, grapes are doing remarkably well. Much was attempted, some time ago, at Nauvoo, by a French colony. Foreigners never have succeeded in this business in our country, where they cling to European methods. The experiment of the Swiss, at Vevay, Ind., was on a large scale and a failure. Almost everywhere on the Upper Mississippi grapes are doing well. Various parties have fine success in the Rock River Valley, in Northern Illinois, near Wisconsin. Here all kinds of grapes are reported to succeed, and the Delaware in particular. The soil approaches sand, with a deep sub-soil of shale or gravel. It is known as hazel land.

It is important to know what success attends grape growing on the prairies, which occupy so large a portion of this State, a considerable portion of Indiana, Missouri, Iowa, Minnesota, Nebraska and Kansas. This is a wide region, and one must travel and observe much to be able definitely to make a statement which will apply to the whole. There is reason to believe that Illinois contains every variety of prairie, as well as of timber soil common to the region named. To tell how grapes do here will indicate how they will do in similar sections.

In the heart of the black soil prairie region at Bloomington, grapes have been thoroughly tried. Dr. Schroder has four acres; K. H. Fell an acre, Mr. Phoenix five acres, though not in full bearing, and is preparing to put out as much more; also Messrs. Overman & Man; as well as some other parties. In all there are about thirty acres. Dr. Schroder, a German, has given his vines great attention; trains them on trellis and is successful, even with the Catawba, though they rot with him, as elsewhere. It seemed to me that his situation is not favorable; the ground though slightly rolling, is bordered by a slough, and there is higher ground in the vicinity, though such a thing as a hill is nowhere near. He trenches two feet deep, but only two and a half feet wide where he plants. For experiment he has all the various kinds. He does not speak highly of Concord or Hartford Prolific. I do not remember that he praised the Delaware, for he showed some of the vines four years old about three inches high. He showed two rows of Catawba, planted on ground not trenched which were poorer than any of the rest. He plants 4x6, and has strawberries between the rows, which he will take up because they injure the vines. Every one of experience says nothing but grapes should grow in a vineyard."

Of the vines of J. Smith & Son we can speak from personal experience, and from that of others. We think them the best grown vines that we have

seen. Whether this is the result of the soil at Des Moines or the culture, we cannot say; perhaps part of both. Des Moines is on the great limestone region of Iowa, and it may be this gives such health to his vines. Vines grown at Cincinnati are nowhere beside them in value.

The hazel land spoken of is always a lighter colored soil, and contains more clay than the common black prairie soil. It should always be selected for orchard sites in preference, as it is always better drained than most other prairie lands. For the small grains this hazel brush land is invaluable; but for corn, has no advantage over any other prairie. In Northern Illinois considerable of this land occurs, and becomes less abundant as we approach the line of 39° 30'.

Dr. Shroder prefers wine grapes, and for this use Norton's Virginia and Herbemont are his favorites. For the table and for market Hartford Prolific and Concord please him, while the Delaware has not given him satisfaction.

"Mr. Feil has 1,500 vines of the Concord and Hartford Prolific, and is preparing four acres by plowing from 18 to 20 inches, when he will plant one-fourth Delaware, and the rest of the sorts above named. Last year his Hartford's averaged eight pounds to the vine; a few bear as much as 20 pounds, and sold for 20 cents a pound. They are planted over a brick drain and grow on trellis. The Catawba is very uncertain with him. Of the Delaware, he says thousands of roots are sold which are worth nothing, owing to excessive propagation, but knows good roots can be raised.

Mr. Phoenix is largely interested in grapes. He is a nurseryman, as intelligent and enterprising as any of his class. He has neighboring competitors not far behind him. With from 50 to 200 men in constant employ, 160 acres in apple trees, as well as additional ground of other stock, he has need of having his eyes open and his wits at work. And yet he is in doubt whether the Delaware, the best of all our grapes, is going to be trustworthy. He calls it his study night and day. He gave me his experience; it is candid, instructive, covers the whole ground and ought to be his own answer.

Everybody wanted Delawares. He had several thousand. So soon as the vines made what was sufficient growth, he ordered his men to layer them

then, as they extended, and as laterals pushed out, they were layered, and thus, through the whole season, everything that could start a root was smothered. The best of those were sold—that some were fair roots I know, for they grew with me from three to four feet last year—the rest were set out the next season, but did not grow very well, and in the winter great numbers of them died. This process, with the same results, went on several years. Last summer he made a visit to the vineyards on the Hudson; and in particular to that of Mr. Mace, at Newburg. Here he was struck with the sight of the Delawares. The ground was clear, the vines were trained to stakes, even the tendrils were pinched off, they looked stocky and fruit was abundant. Immediately he wrote home to have his own vines tended in the same manner; when he returned he had been obeyed only in part—he saw to having it done, but the season had advanced and he must wait another year, or till the vines can recover. A great many nurserymen have had, I doubt not, the same experience. The vines they have sent out have proved very unsatisfactory; and it seems this is to be said of the Delaware, and so long as this constant smothering as well as raising roots from eyes of this same wood, goes on, nothing good can come of the vines so propagated. The simple requirement is this, the stock from which new roots are to grow must be *from fully ripened wood*.

In the yard of Mr. Green Miller, in the suburbs of Bloomington, I was shown the vines of the Hartford Prolific, a grape not of first quality by any means, but it is earliest of all, or none are earlier. The account of these vines ought to set people thinking. They were obtained from Mr. Phoenix four years ago last spring. They were planted to cover an arbor ten feet wide and thirty feet long. Two or three other vines were planted with them. Mr. Miller told me he dug holes about two feet square, put in bones, old shoes and such stuff, and covered without much care. In the fall he put two bushels of stable manure as mulching around the roots of each vine; in the spring he takes it off and spreads it on his garden. Last year and previously he pruned them, according to his limited knowledge, but a German vine-dresser said he would have no grapes because he pruned wrong. This is the fourth year, they bore a full crop. I visited Mr. Miller in his store and got his account. He seemed a very candid man, and I can imagine no reason why his statement is not trustworthy. Besides, I had a similar one of these grapes from the neighbors. He said that they had all they wanted to eat and to make into preserves; that they gave some away and that his wife sold some; in short, that from these three vines there must have been five or six bushels. On my expressing surprise he said he counted the bunches on one vine, just for curiosity, and there were four hundred and twenty, and, it would seem that if they had been sold at the market price they would have brought more than fifty dollars.

M. L. Dunlap, at Champaign, fifty miles east of Bloomington, is also preparing to plant grapes largely. Last summer I saw his vines; they were treated in true nursery fashion, the laterals making roots and the rest of the vine lying about in a way that would distract a vine-dresser. And yet, notwithstanding this treatment, almost every variety of sufficient age was loaded with fruit, and no

rot apparent. Perhaps Mr. Dunlap's plants and trees have a partiality for him, for I saw very small apple trees bearing so much as to seem all apples. In planting 1000 vines, he proposes the following divisions: 100 Hartford Prolific, 200 Concord, 100 Delaware, 100 Diana, 200 Norton's Virginia, 100 Catawba, 100 Heibemont and 100 of the new kinds on trial. He prefers the mulatto to the black prairie soil. He thinks the Diana has been overlooked, that the Delaware must be one of the best for some parts of the State, and with special manures, for all parts. Should Mead's Seedling prove what it is claimed, it must be the grape. This is so similar to the Catawba that judges cannot tell the difference, and all the difference claimed is in the vines, which do not grow from cuttings, and the fruit does not rot. He thinks the Concord and Hartford desirable at present; that in time they must give place to better ones. In planting he would not trench, but would sub-soil a foot deep; set six feet by eight and train on trellis. He thinks it important that only one shoot should grow the first year, and it be tied to a stake, particularly the Delaware.

I have mentioned Mr. Buchanan's vineyard. He says that after the first few years of planting, the Catawba does well; when six or seven years old it begins to rot; hence it will take this length of time at least to try this new variety. Their success is various in different vineyards. Mr. B. said that last year some with fifty acres did not do as well as he did with seven acres. Bear in mind that all the vineyards around Cincinnati have been trenched two feet deep. He has come to the conclusion, after many years of experience and observation, that they plant too thickly and prune too close. He thinks that the rot is caused from a sudden change from heat to cold; that the vine takes cold and becomes diseased. I believe all careful observers have concluded that the rot follows a change in the weather. The greatest drawback they have is a want of labor. Grapes need manure, that from the stable is good, ashes are best. Too much manure gives an unhealthy growth on sandstone soils; lime is good; here grapes rot less than on limestone. If he were going to plant a vineyard he would put two cuttings where he would have the vine grow—he would trench or plow twenty inches deep: if there is a gravel sub-soil, common plowing will do. He is certain the roots descend three or four feet at least. All grapes rot with them, but none so bad as the Catawba.—Thinks Norton's Virginia will make a valuable red wine, but a white wine such as the Catawba sells best. When I told him the Virginia brought twice the price of the Catawba at St. Louis, he said it is because it is something new. He said that vines having half a dozen bunches are just as likely to rot as if they were loaded. Sulphur in a greenhouse is a preventive—in the field it is useless.—Volcanic regions are always good for grapes. Such are the notes I took from Mr. Buchanan."

We have observed that in all cases when a grape vine has been allowed to run under the eaves or cornice of a house or the coping of a wall, that the fruit in such situations is always sound,

and we have heard it whispered that Mead's Seedling has been thus protected. The inference is that the heavy dews which fall on the bunches of grapes induce the rot. The immunity as above and in all cases when grape vines run into the tops of trees that ward off the dew, would appear to lend some truth to the theory. Along the lake shore where there is little or no dew, the grape does not rot so much; while, on the contrary, in the south part of the State, where dew falls like a small shower, saturating the grass and foliage of plants, the rot is the most intense. We have suggested to a grape grower near, Dr. Meeker, that he make a shelter, say of a foot wide or more, directly over his grape trellis, with a view to protect them from the falling dew, and thus test the theory.

"Some of Mr. William's struck me as sound. He says Norton's Virginia does well in that region, and that it will make excellent port wine. After long experience he has become opposed to the system of pruning as established. He would let the vine grow pretty much as nature designs, and that there may be shade for the fruit, in which case it always is sweetest, and that there may be room for the sap to circulate. He would, however, keep the vines within certain bounds. During the Summer their German vine-dressers go through the vineyard and tear down the laterals with harsh jerks, and make quick work. Of course many of the eyes are injured. I believe they call this business "kiteing." Mr. W. had a bitter experience, which I give. On this place he had a fine border of Catawbas. It was the pride of the place. It bore well; he would have it do better. He set a German to work at it; he spent two days in getting it right. Then there was great lamentation among the women; their arbor was destroyed. This was several years ago. The vines have not done any good since. He says decidedly, a vine must be treated in a uniform manner, or it will be ruined. It will not do to make a dwarf vine run on a trellis, nor to dwarf one which has been extended. As it has been trained the first four years, so should it ever afterwards be trained. "Train up a vine in the way it should grow, and when it is old it should not depart from it." Mr. W. gave an instance of a German at Sandusky who pruned close, and whose grapes were the only ones in that region which rotted. The German said the ground was too rich. Does it not seem that the richer the soil is the more room in and out of the ground does the vine require? Does it not seem that in pruning, particularly in the Summer when the sap is

abundant, that the fruit receives more sap than it can possibly use, and that it is the sap more than the grapes?"

There can be no doubt that our German vine dressers prune too severely and many of them acknowledge it and are giving their vines more space.

"Dr. Warder's vineyard is in a fine condition, and yet the grapes rotted badly this year. Everything is in finest order and the fruit trees are thrifty and in great variety. One sees thence many miles of the Ohio. The house stands about three hundred feet above the water. As a fruit farm, the Doctor's place is but a few years old. Of the Delaware, I was told they did not like it so well as the Catawba, because, being sweet, they can eat but few of them. They showed me some of Dr. Grant's five dollar Delawares. I could see them. They looked like dried smart-weed, and very poor at that. I find many similar vines of this variety from many other sources. They told me what I had never heard before, that is, that their dogs eat grapes, and they eat them as readily as a hog eats corn. Almost every one I have inquired or thinks it would be a good plan to hedge a vineyard with evergreens. Beside the protection, it would secure a more equal temperature. It might prevent rot.

What I have related of the three vines at Bloomington would lead one to think that the prairie soil is most excellent, if not superior, for grapes. I know that it is a solitary instance, but I see no reason whatever why any one else may not do as well. I think that success on the prairies will turn upon giving the vine room, so that it may have branches to correspond with the great mass of roots which a soil of such wonderful fertility is certain to produce. If this position is true, no one can estimate the value of the prairies for grape-growing and wine-making. The time may come when, in many sections, a bucket of wine will be more easily obtained than a bucket of water. We are only beginning to develop the riches of our country. Clearly it is a superior race which is doing it. For two hundred years, California was known by the Spaniards. The Anglo-American got possession, and in twenty years they have developed more resources than Rome developed in her whole empire during a thousand years. It is good for us to know these things.

I should not omit speaking of the Islands. They are nearly opposite to Sandusky. Here grape-growers have been remarkably successful, and commenced the business next after they at Cincinnati. Several years ago I was on Kelly's Island, whence so many grapes are shipped to all parts of the country. From my recollection they have a soil of rather stiff clay and the rock are limestone. The lime used in Northern Ohio mostly comes from the Island. They claim that here the crop always is certain. I have understood, however, that they have been troubled, to some little extent, with the rot. It is certain that the grapes raised here and on the shore sell better in Cincinnati than their own grapes. The fruit dealers there told me so.

In preparing the ground on Kelly's Island they dig ditches, parallel to each other, three feet deep and thirty feet apart; flat stones are set up in the bottom, so as to form a roof, and small stones are put on these within fourteen inches of the surface,

when they fill the ditch with a plow. They think the common plan of trenching *does more harm than good!* They plow the whole ground as deep as they want to plant the young roots. Their distance is 6 by 8. They train on trellis.

Nine miles east of Cleveland, at collamer, among other vineyards, I visited those of Dr. Dunham. He has four acres in bearing, and is putting out eight or ten acres more. He has the Catawba mostly, which is the best grape for that region. I did not hear much of the Delaware. Of course, it would do well. Almost all these vineyards have a northern or north-western exposure. The vines were loaded to their utmost capacity. I cannot do better than to give Dr. Dunham's own account, which he has kindly furnished me:

DEAR SIR: In reply to your inquiries, I would say: 1st. That in preparing the ground for a vineyard we simply give our land a good deep plowing, and then with a spade prepare a place for the roots. If the ground be sod-land I should prefer having it broken up late in the Fall, and then, before setting the roots in the Spring, I thoroughly harrow to prevent the growth of grass, which is apt to show its self at the edge of the furrow. When practicable I should much prefer the Michigan, or double plow, which throws the sod at the bottom of the furrow, placing it so deep that the grass cannot possibly grow, and furnishing food for the young vines.

2d. Our method of cultivation does not differ, materially, from that given to other crops. We use the plow, cultivator and hoe freely, so as to keep the ground clear. We are careful not to plow deep near the vine, so as to endanger the main roots, but prefer cutting off the surface roots. After the crop has been gathered, we plow, throwing the earth to the vines, leaving an open furrow midway between the rows so as to carry off the water, and in the Spring plow from the vines.

3d. We train our vines to two stakes each (stake seven feet long), placing them from twenty inches to two feet on either side of the vine.

4th. We adopt the spur, or short pruning, leaving spurs, with two buds each, at regular intervals, and the leading cane with five or six buds. When vines first begin to bear there should not be more than one or two spurs left on each branch, but as the vine acquires strength more should be left.

5th. Our vines are now seven and eight years old, and this season yielded four and one third tons per acre. I think they may be made to yield five or more tons to the acre.

The reader will observe that here is no trenching at \$75 an acre, nor draining at half this sum: and not even sub-soiling. The Cincinnati grape-growers, in speaking of this method, predict that after a few years vines planted in this way will gradually die out. I could not see it. Suppose they do. It is easier to replant a vineyard every ten years than to trench. It is a small job to raise roots from layers.

Four tons and one third are 8,666 pounds. Twenty bushels of wheat, a good yield for an acre, are only 1,200 pounds; 50 bushels of corn, 2,800 pounds; 100 bushels of potatoes, 5,000 pounds. The average price of these crops will not be two cents a pound. If grapes will not bring eight cents a pound it is more profitable to make them into wine. An acre of Dr. Dunham's grapes would make more than 700 gallons of wine. After the

fourth year, the expense attending an acre of grapes will not exceed that of wheat, because what costs more is balanced by the pleasure one has in working them. A horticulturist often prefers some kinds of work to eating oysters or reading novels.

Here is the place to show how one is to be free from the care which burdens so many in wanting help. It is to be understood that no more is to be undertaken, except in times of harvest, than you and your family can do alone. As a general thing, I never saw any good come of depending on hired help to raise large quantities of fruit; and in commencing the business it will not do at all. Often will the wages consume the profits, and more too, and the deficiency must be met from other sources. Where there is much hired help, there are repeated complaints of carelessness, and of rare plants being hoed up because they are supposed to be weeds. The great evil lies in having too much land. Twenty acres, well worked, make a large farm.

I will speak of one more vineyard, and where much other fruit also is raised. If I desire one thing more than another, as regards our country at large, it is, to see professional and literary men become growers of fruit, and owners of enough land to make them interested in farming affairs, for there is no other way in which they can so much honor industry, so well preserve and build up their health or lay deeper the foundations of Christianity and Civilization.

I visited the grounds of the Rev. A. S. Hayden, a well known and popular preacher in Northern Ohio. A few years ago he accepted the place of principal of the Western Reserve Eclectic Institute, indeed he was a principal founder, and under his instructions, Maj. Gen. Garfield, then young, began to unfold his powers—afterwards, he became a teacher and finally, on the resignation of Mr. Hayden, the principal. At the same time, Prof. Wilber, now secretary of the Illinois Historical Society, was a teacher and the three worked harmoniously together.

Mr. Hayden's farm is seven miles east of Cleveland. I had not seen him for several years. As I approached, I saw him carrying a pail to the barn. I searched for him, and found him feeding swill to his hogs, which were kept in a neat, dry pen in the barn. I stood on the steps above; he did not see me; at last I spoke, and asked the farmer how he got along. It was a mutual surprise. He did not look a bit older than ten years before. We remembered much; we have forgotten more. Almost the first thing he did was to show me his grapes, growing in bountiful clusters on the trellis and extended arbors. Through the grounds, and interspersed with these, were boughs bending with beautiful yellow peaches. How many men, brought up exclusively to farming, have no such sight to show—no such fruit for their families to enjoy. It is to be added, that horticulture does not interfere with the reverend gentleman's sermons. On the contrary, I am sure he is better able to speak by being acquainted with so much that is of interest to "men's business and bosoms." Honor to all such literary men.

Only a few years ago no grapes were seen in this region. Now you see vineyards on rough and unlevel ground and on the side hills, where boys used to hunt for poor strawberries and where two acres of land would scarcely keep a sheep, they pick enough grapes to feed and clothe a family and to

educate the children. Springing through the flagstones at back doors are Isabella grape-vines; they cover the kitchen and run along the wood-house, often a hundred feet, and here they pick grapes in large baskets."

Our reader will excuse us for occupying so much space, for it will well repay them for the perusal.

Correspondence.

For the Illinois Farmer.

ALTON, ILL., Feb. 26, 1864.

M. L. Dunlap, Esq., Dear Sir:

Coming home to-night I found the *Illinois Farmer* on my table, and am tempted to write you after looking it over.

First, to say how well pleased I am at your good resolution to make the Alton horticulturists a visit next summer, and to offer my services as *cicerone*, having had a little experience during the past year. To be sure, we shall be a poor show after this terrible winter, but for that you will know how to make allowance. Our peach trees are very sick at heart, though the sap wood and bark promise to make them partially good again. Some are cutting the young trees to the snow line, and this in case of trees set last year is, I have no doubt, the best. Others shorten in severely. Others are reducing four and five year old trees to bare poles with a few forks. It is found that upon getting down to the large limbs of trees of this age that they are quite sound and of a healthier color. Older trees are more injured again. Apple trees unhurt. Pear trees have last year's growth hurt in some localities. Cherry trees are generally good out here, nine miles from the river; sweet cherries are complained of at Alton somewhat. Dr. Hull thinks his plums are injured; I cannot see that my trees are hurt. Apricot trees are but little injured here or at Dr. Hull's. Quinces all right. Grapes a good deal hurt—can't tell yet how much; those loosened from trellises are of course in much the best condition. Lawton blackberries badly killed back. Raspberries suffered a good deal.

The coming year we shall have apples, pears, very few peaches, some cherries, few grapes will show you what there is.

I have been purchasing part of Dr. Hull's tract, which, with what I already have, gives me about 200 acres on the bluffs above Alton, where I intend to do my peach and grape growing hereafter. From what running about I have been able to do I am satisfied that the *loess* or bluff formation of the Mississippi is the best fruit soil of the upper valley: surpassing the South Pass region as more

pervious to moisture and more suitable in its constituents; and having I believe a drier atmosphere above it in the season of ripening fruits.

But I will put in a special plea for Alton, &c., some other time and go on. I only wished to say I wished to call your special attention to the Alton bluffs, and show them to you when you come.

In the second place I wish to remonstrate with you in a friendly way for the delay in the appearance of the *Illinois Farmer*. Its tardy monthly appearance greatly injures its influence, which otherwise would be excellent, for it is very generally liked *when received*.

The printing of Transactions is pretty well along. They will not be so good as I could wish as regards discussions, but many of the essays are excellent. I am afraid I shall be obliged to omit many fruit lists, which I regret, as I regard them of a good deal of pomological value. But there is a terrible lot of matter to print, and something must be left out.

Truly Yours,

W. C. FLAGG.

—We shall be glad to accept the kind offer of our good friend Flagg, in looking through the gardens and orchards of Alton, for we know we shall have a rich treat, not only for ourself but our readers.

Ed.

Damage to Fruit Trees.

J. A. Carpenter, of Cobden, writes under date of March 10th: "Weather warm. Our losses in nursery trees and plants will not reach ten per cent. by the cold of January—never had a better stand of buds; they have wintered finely."

N. C. Mecker, of Dongola, writes: "This is now March 6th, and our peach trees are improving, in appearance at least. The inner bark is not so black as it was, and thrifty limbs which some time since were drying up, now are getting plump and of good color. I should not wonder if the sap coming up from the roots did not, before they leaf out, make them live and flourish. I am speaking now particularly of my own trees; still, they may turn out as bad as any have prophesied, and all have to start from the seed. I think it yet too soon to definitely state what is the fate of the peach orchards."

Mr. Virgil Beale, of Anna, writes: "Peach trees are starting their leaves, so I do not think the frost has injured them much."

Dr. W. Richart, of Carbondale, writes: "My one year old peach trees are all putting out leaves on all the small twigs, some within two or three buds of the point. I can find no buds alive or likely to

grow on branches half an inch in diameter or larger, above the snow line. All my trees in the nursery are alive, and all that I set out last spring, but peach trees three or four years old are very doubtful."

—At this writing, March 15th, our own trees have considerably improved, and we think will mostly come out all right, though most of the visitors to our grounds have no hope of a favorable result, and some have cut their trees down.—Ed.

Carbondale.

Carbondale is just within the great forest of the south part of the State, being a few miles south of the Big Muddy river, and on the northern slope of the great watershed of Egypt. The soil is rich and the surface gently undulating, gradually rising to the summit of the Grand Chain. A large amount of white wheat of superior quality is grown in the vicinity.

Peach orchards have of late largely multiplied, and over four millions pounds of tobacco was shipped last year. Add to this that cotton growing is among the staples, and we have the fact that it is one of the most desirable points in the south part of the State. The Illinois Central have thousands of acres of choice timber lands in the vicinity well adapted to all the staple crops noted above.

There is a neatness about the streets and a show of activity that always attracts the railroad passenger. The fruit growers have formed an association and are going ahead, holding their meetings on the 1st and 3d Saturdays of the month. We shall hope to hear from them often.

Book Farming.

SPRINGFIELD, Ill., March 11, '64.

M. L. Dunlap, Esq. Dear Sir:

I have been a reader of your valuable paper, the *ILLINOIS FARMER*, since you became its editor, and have learned very much about farming, fruit growing, &c. It may be called book farming I presume, but I have put it to practice and find it will work, especially your views on orcharding. I have adopted low-headed trees and varieties that will bear early and stand our hard winters. Will you please send me some scions of the Stauard and Ben Davis apples, a few of each any time before the grafting season is over? I presume you can send them by mail, as you stated in a former number of the *FARMER*. Enclosed you will find twenty-five cents for postage. Yours truly, WM. H. MARSH.

—The scions are sent and you will find them two of the most profitable apples that you have in your

orchard. Low-headed trees and hardy bearing sorts. Book farming—well, that will do it in our style.—Ed.

Cotton in Egypt.

Dr. N. C. Meeker, of Dongola, writes us under date of March 6th :

"We are going to raise cotton this year; I know of many who are so earnest that they will plant by the 1st of April, though the 10th of May has been thought the best time. It is certain that a month's early growth is worth two of late growth, and this may be said of all crops here. It requires a different kind of management to succeed here from what it does with you in farming operations.

Whatever crops do not get a good start, and are not mostly or wholly made in June or July, are not likely to be of any value, on account of the dry, hot weather of the later months."

—Just so—we have for years been advocating early planting, in the south part of the State, so as to make the growth during the rainy months.—In this respect the Dr. is only approaching the practice of the best farmers here. Plant early.—Ed.

Horticulture.

Alton Horticultural Society.

SATURDAY, March 5th, 1864.

Pursuant to adjournment the society met at the residence of the president, Dr. E. S. Hull.

Present, E. S. Hull, B. F. Long, J. M. Pearson, A. Starr, F. Starr, H. G. Mc Pike, J. Huggins, James Newman, C. W. Dimmock, J. Burton, E. A. Riehl, John Curtis, F. Curtis, C. Merryman, G. W. Long, D. E. Brown, W. C. Flag. A number of ladies, also graced the meeting with their presence.

Dr. Long presented a quantity of garden seeds, received by him from the commissioner of agriculture, which were distributed among the members.

Members were requested by vote to report upon the success of the new varieties disseminated, and upon the correctness and vitality of the seeds generally.

F. Starr, the essayist for this meeting read some notes upon March work, which, however, sickness had prevented him from putting into shape. Some of the subjects embraced therein were taken up for discussion. The essay was put on file.

TRANSPLANTING.

Dr. Long said the first labor of this season, should be the taking up of fruit trees while they were dormant, and the ground soft. He had once taken up and heeled in 1113 trees, previous to March 12th, and only lost three in transplanting.

Dr. Hull thought it important to take up trees early, especially when planting is to be late, in order that a callus may be formed before setting.

Mr. Burton had succeeded perfectly in planting trees taken up after the leaves were started.

F. Starr has found September planting successful.

It was voted that trees should be taken up as early in March as possible.

PRUNING.

Dr. Long would cut off the large limbs of apple trees previous to the middle of March. Smaller limbs he would trim later, when the growth is most vigorous. Dr. Warder and Mr. Whitney's practice is the same.

Mr. Starr prunes in winter or in summer after the leaves are out.

Mr. Burton prunes in winter because the wounds then dry better, and then is the time of leisure.

Mr. Huggins prefers to prune large limbs in winter, and small ones in June. "In summer for fruit, in winter for wood."

Voted to recommend pruning of large limbs previous to March.

Mr. Mc Pike asked the opinion of the members in regard to shortening in large transplanted trees of Scotch Pine.

F. Starr has practiced shortening in Scotch and Austrian pines. Does not do so with Norway spruce.

Mr. Brown thinks it is an advantage to thin out limbs of Norway Spruce.

Mr. Huggins would not prune Austrian or Norway Pine branches except to put the tree in shape.

Dr. Hull thinks it important to retain the limbs to preserve the vitality of the tree.

Dr. Long has transplanted the Red Cedar from the bluffs in August, with perfect success.

PRUNING OF GRAPES.

Dr. Hull illustrated pruning by a sample of vine from his vineyard. He trains two or three stakes—cuts off last year's bearing wood, takes the strongest cane of last year's growth for bearing—counts off about ten eyes and cuts it off. The cane for wood, he cuts down to two or three eyes—leaves say three bunches of fruit to a spur and pinches off, leaving one to three leaves outside the last bunch—does not pinch off the laterals on the wood cane. As regards pruning the present year, he would defer it until we can ascertain more definitely the effect of the cold of January first on the vines. The buds upon his own vines are killed, except upon the lower terraces or other points where they were covered with drifted snow.

Mr. Riehl said that where the buds were all killed, the new growth must start from below the snow line.

Mr. Dimmock, from the Committee appointed to invite old members to renew their membership, reported that all he had seen wished to do so. A few had not yet been called upon. The report was received and the Committee continued.

The following gentlemen were proposed as new members and unanimously elected: J. W. Schweppe, E. A. Riehl, D. E. Brown, G. W. Long, Chas. Merryman, John Curtis and F. Curtis.

EFFECTS OF COLD OF JANUARY FIRST.

Mr. Huggins exhibited sections of peach trees that had passed through the winter of 1855-6 Being of Strong's Mammoth, and Large Early

York varieties. These were rotten at heart, but new wood had formed outside, and the trees had borne well since. Thinks that where the present season the bark is alive, that moderate cultivation and cutting back will save the trees. Thinks the Large Early York and Early Tillotson are the most hardy this year.

F. Starr said old trees have suffered most with him; young trees less.

Dr. Hull said that the injury in the winter of 1855-6 was not caused by excessive cold. The thermometer then sinking no lower than 12 degrees below zero. But in the fall of 1855 the peach and cherry cast their leaves; a new growth was put forth, and small fruit of a second crop formed, and the trees entered the winter in very bad condition. The present winter the preceding sleet caused more injury than the excessive cold. In the case of injury to trees he thinks the injury is thrown off not covered up.

Mr. M'Pike said the section exhibited by Mr. Huggins looked like all other peach trees of equal age.

Dr. Hall said trees here on the bluff were but little injured. Heart cherry, contrary to his expectations had escaped. The wood of the peach of last years growth was a little discolored.

Mr. Huggins thought trees of medium age, like Dr. Hull's endured the cold better than younger or older trees.

Mr. Brown said peach trees were improving in appearance.

On motion of Mr. Dimmick the Secretary was instructed to write to the Commissioner of agriculture, and solicit a supply of flower seeds for the lady members of the Society.

On motion of Mr. Long, a similar instruction was given as to new varieties of grape vines.

Mr. Riehl was appointed an essayist for May.

Dr. Hull will read an essay upon "Roots" at the next meeting.

Mr. Huggins, Maj. Long, and Mr. Burton, being appointed a fruit committee *pro tem*, reported the following apples on exhibition.

By Mr. Flagg, Pryor's Red and Newtown Pippin, fine specimens.

By Mr. Curtis, very fine specimens of Newtown Pippin, and a sweet red which may be Campfield.

Mr. Pearson, Mr. Dimmock; and Mr. Flagg, were appointed a committee to select future places of meeting.

The Society then adjourned to meet at Messrs. A. and F. Starr's on Saturday, April 2d, at 10 o'clock, A. M.

W. C. FLAGG, Sec'y.

The Alton Horticultural Society is among the most useful institutions of the State and is having a most decided effect on the surroundings of the city and the vicinity.

The fruit growers of that section are mostly men of wealth and education, thus combining ability and means, to develop the resources of what is naturally one of the best locations in the west for this branch of business whether we consider the nature of the formation of the river bluff, the equalizing effect of the river, the mild summer climate, or the facilities for transportation. We shall look forward to these reports with especial interest.

We also hope to give our readers a more detailed account from the gardens and orchards of that locality early in the season, from a personal inspection. Since our last visit to that place great progress must have been made, judging of the large shipments annually made since that time.

In this connection we copy from one of the Alton papers a description of the grounds of Dr. E. S. Hull.

"Dr Hull's farm is situated about three miles above Alton, near the river on which it looks down from an elevation of some two hundred and fifty feet. The somewhat projecting point affords a view extending from the mouth of the Missouri, to far above the Portage des Sioux on the river; and over the Missouri bottom to the St. Charles' bluff, on the opposite shore. The somewhat monotonous character of our level prairie State, gives the force of strong contrast to this picturesque view; and meditations upon the present and past along the river cliffs invest them with the "rime of age," and the romance of history. It was along these rocky shores, if we may believe Indian tradition, that the dread monster of the Piasa preyed upon the red men, and another Curtius offered himself in sacrifice for the welfare of his countrymen. Here came Marquette gliding solitary along the then lonely Father of Waters and saw the terrible monster painted on the cliffs, two centuries ago. But now the laboring steamer awakens the hollow echoes of the over hanging rock, and the commerce of a thousand towns passes by.


But the scenic attractions of this locality are added others of more substantial character. The *Loess or Bluff Formation* of this part of the Mississippi, is one of the best fruit soils. The confluence of the Mississippi, the Illinois and the Missouri, tempers the severity of frost; and the elevation of the bluffs throws off the cold airs of Spring and Autumn and the unhealthful moisture of summer."

Here Dr. Hull began his labors in 1859 having sold his first fruit farm west of Monticello to the Messrs. Starr. Those who visited his place during the past summer, will bear witness to the success which has attended his severe labors. The Peach, the Plum, the Nectarine, the Apricot, the Cherry and the Grape, all grew in great profusion and excellence.—For beauty, quality and quantity combined, the orchard was never excelled in the West.

Dr. Hull has growing

50 Nectarine Trees,	20 Quince Trees,
450 Apple "	2,600 Grape Vines,
200 Pear "	2,000 Current Bushes,
1,500 Peach "	100 Gooseberry "
100 Cherry "	500 Raspberry "
200 Plum "	1/2 Acre Strawberry,
12 Apricot "	

One thousand Newtown Pippins are to be added, it is believed, the present Spring, and the vineyard will probably receive some accessions."

 A London journal says that as the habit of smoking has increased in England that of deep drinking has gone out. That is something in favor of the smokers.

Miscellaneous.

A New Product of the Orchard.

APPLE JELLY MADE CHEAP FROM NEW CIDER.

At a late meeting of the Ohio Pomological Society, at Toledo, considerable interest was excited by the exhibition of a number of glass jars of beautiful jelly, manufactured from cider on a Sorghum evaporator, Messrs. Corey & Son, of Lima, Indiana. It was of fine color and consistence, and excellent flavor; and if it can be made as cheaply as the following statement of the Messrs. Corey represents, it cannot fail to become an article of commercial importance.—*Cor. Ohio Farmer.*

STATEMENT OF COREY & SON.

We send you by express several specimens of cider jelly, which you will please have the goodness to test and dispose of *ad libitum*.—It is made purely of the juice of the apple, without any mixture whatever, no sugar, and no chemicals. The apples were ground and pressed in the ordinary way, and the cider, after being strained, and before its fermentation, was passed in a thin and nearly continuous current over the intensely heated surface of our clarifying and evaporating sugar pan. The whole process of cleansing and condensing to the requisite consistency of jellies, being about eight gallons into one, is performed in from twenty to thirty minutes from the time that the cider enters the clarifier until it leaves the opposite end of the evaporation, duly cleansed, condensed and cooked. From fifteen to twenty barrels of cider may be thus transformed per day of ten hours' service, on a pan of suitable dimensions for family or neighborhood use.

Our apparatus is made of copper, and proves equally adapted to the manufacture of these pleasant tarts and our Northern sweets. It is observable that cider jellies do not (at least in our three years' experiments) congeal into candy, nor mold on the surface. Its flavor also improves by age. The jellies herewith presented, of the past season's manufacture, were made of a mixture of tart and sweet apples, and the fair samples of several thousand gallons made in this region by ourselves, and by others who have adopted our implements and method of manufacture. An abundance of the like may, in propitious seasons, be made to advantage in all the fruit-growing portions of our country. It has been much admired whenever introduced, and our physicians prefer it for their patients to other jellies made of the best materials.

SPRUCE UP.—If you get a moment to spare, spruce up—put that gate on its hinges, put a little paint on the picket fence you built last year, trim up about your door yard, make it cosy and inviting; don't say you can't find time for these things. The fact is, you have no right to go slovenly—your wife and children will be happier, your farm will sell for more money in the market, and be worth more to you at home if you devote an odd hour now and then to spruce up.

Flax Culture—Porgie Oil a Substitute for Linseed Oil—Culture of the Blackberry—Grafting the May Cherry on the Morello.

[Letter from Rural.]

CHAMPAIGN, March 1, 1864.

In the culture of flax for seed it has been customary to sow only half a bushel of seed to the acre. This practice was obtained from the oil mill men, who have generally furnished seed, and have been desirous to obtain the largest amount from the seed sent out, without any regard to the yield per acre. In all cases a bushel to a bushel and a half should be sown, making as a rule, that the richer and finer the soil is pulverized the less seed is required.

There is no crop that pays better for manure than flax, and if possible to avoid it, this crop should not be sown without more or less being applied. If the land for flax has been fall plowed, or if corn stalk stubble is used, the manure can be spread on the surface and either harrowed in, or what is better, use a six-shovel, two-horse cultivator. In all cases the roller should follow the sowing.

Flax should be sown early in April or the last of March, though sometimes good crops are grown on sward land turned over the first half of May. The brown seed is the best variety to sow.

In clearing the seed of foul seed, such as yellow seed, cockle and charlock, use a long mesh wire screen, just wide enough to allow flax seed to pass through edgewise, while all seeds, such as cockle, oats, wild buckwheat, etc., will pass over. It is next passed over a square mesh screen, the meshes of which are the right size to pass through fine seeds, but do not admit the flax seed, which pass over. It is very important to have clean seed, if sown early and thickly seeded, the weed seeds in the land that have been deeply buried do not come up in time to do much harm before the crop is sufficiently advanced to smother them down; but in the case of the seeds sown with the crop it is different, as these seeds having been well preserved come up at once and present a vigor far surpassing those that have been retained in the soil through the winter.

The high price of flax seed, and the new demand for the lint, make this a valuable crop, and will repay for an unusual attention to it. So long as exchange continues at present rates the price of linseed oil must rule high, unless some new product should take its place. Oil made from the fish called Porgie is attracting considerable attention at the East, for outside painting, and may prove a rival to Linseed, as effectual as Benzole has to Turpentine.

BLACKBERRY CULTURE.

This fruit has become so popular, and withal so cheap, that increased attention is being paid to it. The Lawton is the variety mostly planted, yet the main supply of fruit has come from the wild plant about the fields and borders of the woodland. In the south part of the State large amounts have been gathered from the bushes growing along the Illinois Central railroad, but these have all been cut down, much to the regret of the inhabitants, though none to passengers, or the pockets of the Company.

In setting out a plantation of blackberries the land should be dry and rolling, of hazel brush or mulato soil is the best. Trench plow a foot deep and lay off in rows eight feet apart; in these rows set the plants two feet apart; keep down all suckers except for a width of six inches in the row, which will soon form a perfect hedge. When the plants attain about four feet cut the tops with a pair of hedge shears, and as the new tops shoot above this line cut them off. This will make stocky branching plants, that will need no staking or trellis work to keep them in place. The space between the rows can be planted with cabbage the first year and worked in the usual way, and the following season with a double shovel plow or cultivator. The rows should have an occasional side trimming with the blade of an old scythe or corn cutter to keep them in place.

We are setting two acres in the manner described above, being obliged to abandon the old plantation where the rows were set four feet wide, as the plants filled the space so completely that a horse could not go through, and the whole was given up to the plants. With rows of eight feet, some three or four feet will be retained for a passage-way for the fruit-picker and the horse for the purpose of cultivation.

The Lawton has two faults: one is that it winter kills, and the other that it is too spreading in its habits, and a more upright grower is desirable.—We therefore use plants selected from the woods when in bearing. At this time our plants look as though they are considerably injured by the hard freeze of January 1st, and of course it is not safe to say they are perfectly hardy. In the woodland the blackberry is if possible in a worse condition. It is possible that the lower part of the plant not injured may produce a partial crop. Too little is as yet known of field culture of this fruit to lay down positive rules in regard to pruning and the hardiness of varieties. The mode of planting as above is pretty well settled, as well as the fact that we should look for a more hardy variety than the Lawton. It is supposed that several of these have been found, but planters should not too implicitly rely on the statements of interested parties, as it is possible that the past winter may have sent some of them up.

The Dorchester and Newman's Thornless are of little value, and it is useless to throw away time and money with them.

CHERRIES.

CRETE, WILL CO., Feb. 20, '64.

MR. RURAL:—During the past eight years we have planted hereabouts a large number of cherry trees of the sorts from New York, but most of the trees winter kill. A few trees of the May or Early Richmond have been planted and produce fine crops. Two years since a farmer here grafted two large Morello cherry trees, and last year they produced a peck of fine fruit. Now there is a great excitement in regard to this cherry, and one man has contracted to set over five thousand grafts in these large Morello trees, some of which are twenty years old. Up to this date he has set two thousand grafts.

I wish to know if it is not too early to set grafts, and next in regard to the suckers about these Morello trees. If they will do to set out and graft, I

can soon get up a cherry orchard. Is there not some stock that will not sucker that can be had that is well adapted for that purpose? J. B.

It is a better practice to graft after the buds begin to swell, but grafts of the cherry and plum can be set much earlier. The Mazzard cherry, which is used for stocks at the East, is too tender for this climate, nor is the Mahaleb any better. We have seen nothing equal to the common Morello for a stock on which to graft the May cherry. The sprouts of those can be grafted where they stand, or set out in the orchard. In resetting it is better to set them four or five inches deeper than they grew, and to have the land deeply plowed, when they will be less inclined to sucker, but when they do they must be treated as weeds.

In almost every neighborhood are thousands of these Morello trees which seldom produce any fruit in this country, but which are valuable for stocks for the May cherry.

This cherry is attracting considerable attention in the Eastern States from the fact of its hardiness and great crops.

In grafting the cherry do not split the bark, as is done with the apple, but cut it with a thin, sharp-bladed knife; the small shoots are not split in grafting but chip lapped, wound with thread and waxed.

The May cherry begins at Crete about the 20th of June and at this point the 10th. RURAL.

Sages in Council.

The New York Farmers' Club, as is well known to the readers of the *New York Tribune* and other city papers, is a great institution, brim full of knowledge on all subjects pertaining to rural affairs. The machine is run by prominent men, with an occasional turn of the crank by visitors from abroad. The most difficult subjects are discussed and final decision made, from which appeal is useless—in fact it is a sort of weekly Congress, sitting for the express purpose of settling all rural questions. Here is a sample of their wisdom:

"At a regular weekly meeting of the Fruit Growers' Club, Feb. 18, the first business transacted was to test a bottle of wine sent in by Geo. Dunlap, from Ovid, Seneca county, N. Y., who says:

'It is made from the pure juice of the Oporto grape, so called in this region, with the addition of three pounds of good sugar to a gallon of the juice, and nothing else. The sample is three years old. Please let me know through the *Tribune* what you and your Club think of it.'

The verdict was unfavorable, as it must be of all grape juice of too low a quality to make wine without the addition of sugar. The German proverb is, 'God makes the wine, man never,' that is, wine grows, and man has only to squeeze it from the grape.

Dr. Ward said he was not acquainted with this grape, but, judging from this sample, it does not contain wine.

Another sample of wine was presented by Mr. Williams of New Jersey, and some of the gentlemen present, who did not appreciate the Oporto,

smacked their lips over this sample, and said, 'this is excellent, it is pure wine.'

They were slightly taken aback when informed by Mr. Williams that it was nothing but currant juice and sugar. Thereupon a discussion arose as to the propriety of calling any compound of fruit juice and sugar by the name of wine, except the juice of the grape. Webster defines wine, 'first the fermented juice of grapes, as the wine of the Madeira grape, etc.; second, the juice of certain fruits, prepared with sugar, sometimes with spirits, as currant wine, gooseberry wine, etc.' Finally, the subject was referred to Prof. Thurber, requesting him to find some original word, or compound of words, to stand as a name for all other wine than the grape."

Another chip:

"*Cultivation of Strawberries.*—In answer to the inquiries of a correspondent who lives five miles from railroad and fifty miles from market, whether he could cultivate strawberries profitably, a conversation ensued from which we condense a few of the leading facts. Dr. Ward said that in order to make the cultivation profitable he would pursue almost the same course as with corn; plowing, manuring and preparing the ground thoroughly, setting the plants in Spring in rows in one direction, and working thoroughly between them up to July, then letting them grow as they would the remainder of the season, and the next year, after bearing their crop, turning the vines over as he would a clover sod. Mr. Williams said that in that case the best crop to precede the strawberries would be corn or potatoes, and if the ground was then well manured, it would not then be necessary to add more when the plants were set."

This is doubtless good doctrine for the outside cultivators about the villages of New York, but our people would hardly see it in this light.

Hints to Thriftless Farmers

In almost every agricultural community are to be found men calling themselves farmers, who, to say the least of them, are not as thriving and prosperous as others would like to see them. For no well-wisher of his race desire to see his neighbors unthriftly. No one who cares for the reputation of his neighborhood, or the reputed value of his own property, wishes to see the property or the condition of those around him deteriorating. No lover of his country and of a sound political economy, likes to see the resources of his town or of the country unproductive from mismanagement. We are aware that many in all classes of business, meet with ill success and discouragements from ill health, from sickness or death in families, or from other unavoidable misfortunes. But we have no reference to these. We allude only to those whose ill success arises from causes within their own control.

Permit us just to allude to some of these causes in the form of a few practical hints. Perhaps it may help us.

"To see ourselves as others see us,
And thus frae mony a blunder frae us."

1. Live largely by borrowing, sagely concluding that you cannot afford to buy or make your own tools, till you get a little more "forehanded."

2. After years of experience in borrowing of accommodating neighbors, convince yourself that it is cheaper to borrow than buy, and *keep on borrowing*. Never keep a supply of such common tools as harrows, plows, manure forks, and hoes, as long as you can get them by going after them; and if you chance to *break* one, return it in that condition, and say you think it must have been *cracked* when you borrowed it.

3. Attend all the *farm auctions* you can hear of, and "bid off" all the old wagons and worn-out implements that you think are "going" cheap, including "any quantity" of old "trumpery" that the owners have long thrown by as useless. Should your new purchases need repairs, or break down soon, leave them in the roadside for future repairs; but do not disturb them again till they are rotten, scattered, and gone.

4. When any vehicle or tool *partially* fails, or shows signs of weakness, keep on using it thus, (thinking it will hold *this* time,) till it comes to a general "smash up;" then throw it by till you can get it repaired, (which you should mind never to do,) and borrow your neighbor's till the next auction.

5. Never think of mending a tool till you want to use it. As you cannot stop to mend it then, leave it unmended till you are otherwise provided, and conclude not to mend it at all.

6. Keep the waysides along your premises filled up with pieces of wagons, carts, sleds, coal boxes, hay riggings, superannuated harrows, old boards, rotten logs, rails, and lumber.

7. Never do your haying till your grass gets "dead ripe," your neighbors through, the days shorter, and labor cheaper. Never dig your potatoes till after one hard freeze up, thus losing part of your crop by the freezing of those near the surface. In short, never do any sort of work till you see you cannot put it off and longer.

8. Never have more than one load of wood up to your door at a time; nor any more of that cut, ready to use, than is necessary to last over night or "over Sunday."

9. Spend your stormy days in the bar-room or store, instead of putting things to rights at home.

10. Go to law whenever any one injures or disturbs you, and you think there is any chance to "get a hook" on them. Justice and right are too sacred to be left unrevenged.

11. Sell out and try another place as often as you find anything about your farm that does not suit you, instead of setting hands and wits to work to remedy its defects.

12. Persuade your self that farming "am a hard road to travel;" sell your farm or leave it to tenants, and go into peddling merchandize, or general speculation, until you run aground; then

Get back to farming as best you can,
A wiser and a better man.

Southfield, Mass.

—IN COUNTRY GENTLEMAN.

KUROS.

The Camphor Storm Glass.

We have used one of the storm glasses described in the annexed article from the *Scientific American*, for several months, and it has proved one of the best indicators of approaching storms of any we have ever used:

"Dealers in philosophical and optical instru-

ments sell simple storm-glasses which are used for the purpose of indicating approaching storms. One of these consists of a glass tube, about ten inches in length and three-fourths of an inch in diameter, filled with a liquid containing camphor, and having its mouth covered with a piece of bladder perforated with a needle. A tall phial will answer the purpose nearly as well as the ten-inch tube. The composition placed within the tube consists of two drachms of camphor, half a drachm of pure salt petre and half a drachm of the muriatic acid of ammonia, pulverized and mixed with about two ounces of proof spirits. The tube is usually suspended by a thread near a window, and the functions of its contents are as follows: If the atmosphere is dry and the weather promises to be settled, the solid parts of the camphor in the liquid contained in the tube will remain at the bottom, and the liquid above will be quite clear; but on the approach of a change to rain, the solid matter will gradually rise, and small crystalline stars will float about in the liquid. On the approach of high winds the solid parts of the camphor will rise in the form of leaves and appear near the surface in a state resembling fermentation. The indications are sometimes manifested *twenty four hours before a storm breaks out!* After some experience in observing the motions of the camphor matter in the tube, the magnitude of the storm may be estimated; also its direction, inasmuch as the particles lie closer together on that side of the tube that is *opposite* to that from which the coming storm will approach. The cause of some of these indications is as yet unknown; but the leading principle is the solubility of camphor in alcohol, and its insolubility in water, combined with the fact that the dryer the atmosphere the more aqueous vapor does it take up, and *vice versa*.—*Jour. N. Y. State Agr. Soc.*

"Plum Muss."

Under this euphonious title the London Grocer describes a new article of merchandise. It says: "Plum muss or *lekwar* consists of pure native plums boiled into a mass, no ingredient whatever being added to it; the plums being so sweet in themselves, they require no sugar. In Hungary it is used in both the cottage and mansion, and is a common article of sale in every provision shop.—The poor eat it with their bread, and all classes use it for the several purposes in which our more expensive preserves are found useful. It is of a more solid nature than our manufactured jams, but if found too firm for cooking purposes, it may be thinned with a little lukewarm water as it is required for use, without losing flavor. We are assured that it will keep good for two or three years if carefully stored; it might therefore form an important and economical article of export to our colonies, and for ships' stores it would no doubt prove invaluable. It possesses, as the reader may judge, a very pleasant flavor, is undoubtedly very wholesome, and in the event of its being properly introduced by a good house, must become a very favorite article with housekeepers. It is certainly a novelty, and as it can be obtained in the mass at a very moderate rate indeed, it might be retailed at a price to suit the million.

Spring Wheat in Egypt.

WHEAT.—We learn from our exchanges that the farmers throughout the State, and especially southern Illinois, are already sowing their spring wheat and that large amounts if the weather continues favorable, will be put in the present spring. The only drawback there seems to be is the scarcity of help, though this is remedied in part by many farmers doing their plowing last fall. Two or three years ago, wages for farm hands was only from \$15 to \$18 per month, while now they are from \$20 to \$25, and in some instances, as high as \$30 is paid.

It is also said that the winter wheat has not been injured by the cold weather, and that the prospects were never better for a rousing crop.—*Cairo Democrat, March 11th*

There are at least three good points in the above—fall plowing, early sowing and culture of spring wheat. We want no better evidence that the northern farmers are invading Egypt than the above. Slipshod farming is giving place to the piney woods style that has so long obtained—light is breaking.—Ed.

TO RIPEN EARLY VEGETABLES.—San Francisco papers speak of new potatoes and green peas as among the extraordinary luxuries now afforded in that market. They have also a limited supply of fresh tomatoes, which command the fearful price of two dollars per pound.—*Marysville Appeal, Jan. 28th.*

The San Francisco papers that call the above "extraordinary luxuries," are not well posted, and hence not very good authority. New potatoes are brought in successively, almost all the year round, and have been in market all winter, selling at six to eight cents a pound, as our retail prices current has shown; so of green peas, except that their price has lately advanced to 75 cents; but tomatoes have continued in market with scarcely any advance, and our weekly report shows that the prices have been only six to eight cents a pound.—*Cal. Farmer.*

—Green peas at 75 cents a pound must be rather a luxury, and new potatoes at \$4 80 per bushel. San Francisco market must be a very paradise for market gardeners, or it is a difficult climate to grow such common vegetables.—Ed.

SUGAR AN ANTIDOTE FOR WORMS.—M. Debout says that sugar is an excellent destroyer of worms. He once accidentally put sugar instead of salt on a leech which he wished to detach from the skin, and was surprised at the spasms it produced. He therefore tried sugar on earth-worms, and found it had a similar powerful effect; and has since used it in solution with success as an injection in children.—*British Medical Journal.*

The world moves; in old times sugar used to be considered the best possible encouragement for these parasites.—*Scientific American.*

The Goodrich Testimonial

From the proceedings at the Annual Meeting of the State Agricultural Society, it will be noticed that a movement was made for the purpose of presenting a Testimonial Fund to Rev. C. E. Goodrich, of Utica, in view of the long and laborious exertions he has made, with no pecuniary return, for the improvement in varieties and culture of that most important crop—the potato. We give below the subscriptions thus far received:

Orange Judd, New York.....	\$50 00
Hon. E. Cornell, Ithaca.....	50 00
Hon. Wm. Kelley, Rhinebeck.....	50 00
Col. L. G. Morris, Fordham.....	50 00
G. H. Brown, Esq., Dutchess.....	50 00
Hon. A. B. Conger, Haverstraw.....	50 00
E. G. Faile, Esq., West Farms.....	50 00
S. Campbell, Esq., New York Mills.....	50 00
T. H. Faile, Esq., New York.....	25 00
J. O. Sheldon, Esq., Geneva.....	25 00
T. L. Harison, Esq. St. Lawrence.....	25 00
S. Thore, Esq., Dutchess.....	25 00
W. Chamberlain, Esq., Dutchess.....	10 00
L. W. Rathbun, Otsego.....	5 00
Joseph Harris, Rochester.....	5 00
Solon Robinson, New York.....	5 00
H. T. E. Foster, Geneva.....	10 00
J. S. McDonald, Greenwich.....	2 00
E. S. Hayward, Brighton.....	5 00
Cash.....	10 00
Cash.....	10 00
J. McD. McIntyre, Albany.....	5 00
James C. Carter, New York.....	5 00
Cash.....	5 00
Cash.....	5 00
Luther H. Tucker, Albany.....	10 00

Total to this date.....\$592 00

It is hoped that this amount may still be considerably increased, and contributions from gentlemen in this or other States who appreciate the labors of Mr. Goodrich, may be addressed to Luther H. Tucker, Albany, N. Y., Treasurer of the Fund, who will duly acknowledge the same in the columns of this paper. We submit the subject, with no other remark than the brief expression of our most cordial approbation of the movement, to the sympathies of the agricultural community. Mr. Goodrich is now in very feeble health, and it may cheer the last hours of his sojourn among us, to know that what he has done meets the approval of the farmers of the country.—*Country Gentleman*.

Vegetable culture.

One of the greatest faults in the cultivation of vegetables, arises from the mistaken opinion entertained by many persons, that the quantity of a crop is increased by closely sowing or planting. Nothing can be more erroneous than such a supposition. On the contrary, both in weight and quality, the crop of all vegetables to be as large as the quantity and nature of the ground sown permits, will be found to increase in proportion as sufficient space is afforded for the proper tillage of the ground during its growth, and for the admission of the requisite influence and circulation of light and air.

The greatest impediment to success in the production of fine vegetables perhaps, is want of due attention to the proper tillage of the ground; nothing can supersede the advantages accruing from deep culture; when the plow is used the subsoil plow should follow it, and in all land, whether heavy or light, (except a subsoil of pure gravel,) will be benefited by it. When the spade is used, the ground should be dug at least sixteen inches deep.

Good draining is of equal importance.

It is best to sow and cultivate all crops in drills and rows, in preference to broad cast. The crop is tilled at less expense, both of time and trouble. The hoe during the growing season, should be continually at work, and in direct proportion to the complete eradication of the weeds and to the keeping of the ground open and loose, will be the weight and quality of the crop.

The rotation of crops should be attended to. Manure should be given to crops above ground, as the cabbage, peas, the potato, (for *that* is not a root,) and similar vegetables. These should be followed by root crops, as carrots, parsnips, &c., with less manure.

Those who are experienced cultivators, have no need of these suggestions but few, who are not so, will not be easily convinced of their importance, until by direct experiment they are satisfied of their value and truth.

We take this opportunity to call attention to the advantage as regards the early maturity of many vegetables to be derived from starting them in a hot-bed in Spring. The trouble is not great, and the time saved is valuable.—*Farmer and Gardener*.

Protection to Orchards.

It is well known that peach and other fruit trees, in many sections of the country do not flourish as they did in former times. Some of the older inhabitants of the country can well remember the peach trees that were thirty or more years old and still vigorous, and continued to bear annual crops of good fruit. What is true of peaches is also true in some degree, of apples, and other fruits.—These trees do not survive as long, and continue fruitful as they did in the times of the early settlement of the country. But this is not satisfactory, because the effect is the same when the trees are planted upon the virgin soil. Others assert that the seasons have changed, without giving any cause for such a change. It may not, perhaps, be difficult to account for this change in the durability of the orchards of the present day, from natural and known causes. During the last forty or fifty years immense tracts of forests have been removed, giving place to open cultivated fields. This has caused the summer showers to fall less frequent; and has resulted in the drying up of many of the small streams, and exposing the entire country, more or less, to the fierce blasting winds of winter; and, so far as these causes operate, have changed the seasons. It is no doubt the effect of these cold winds of winter upon the open and exposed country that has caused the destruction of thousands of our peach trees, and wrought serious injury to other fruits. The only partial remedy for this, is to select the most exposed side by planting belts of evergreen and deciduous trees. The benefit of

such practice was made the most striking in an instance that came under the writer's observation during a severe winter that occurred some years since. Two extensive fruit gardens, both devoted to the various fruits and occupying adjoining enclosures; one was protected on the Northwestern side by a belt of young native timber, and the other was open and exposed to the winds from these points. A severe cold wind occurred during the winter. In the exposed grounds the trees and vines were more or less injured, and many were killed outright—while in the other enclosure, protected by the young timber, not a tree was killed, and few sustained any injury at all.—*Rural Reg.*

Training of Grapes.

During a visit some months ago, to the extensive vineries of Messrs. Underhill, Croton Point, they pointed out the importance of allowing the vines sufficient room to extend themselves, especially in soil of much fertility—rich soils requiring higher trellises and greater distance for the vines. Soils of moderate fertility are preferred.

It is becoming a common practice to insert the stem of a tree into the ground, with the branches trimmed and cut at a uniform length from the body, but tapering upwards in the form of a pyramid. The vines, properly trained on these, and thinned during the summer, present a beautiful display when loaded with the ripened clusters. Cedar and locust trees are the best for these purposes.

The *Annual Register*, some years ago, described another mode of training: Stakes eight feet high are set seven feet apart, a vine planted at each, and immediately cut down to two eyes. The first year two shoots are allowed to grow, and are carried up spirally, both in the same direction, about five inches apart, until they reach the top. They are pruned back in the fall to eighteen inches, two shoots are carried up as before from the two upper eyes, the laterals requiring some pruning. In the fall, the vines are cut back to within eighteen inches of last year's wood. This course is continued till the vine permanently covers the whole stake or post. Whatever surmounts it is cut back. The fruit is borne on the side shoots, the pruning is done on the short spur system, and a handsome pyramidal form is given to the whole.—*Cultivator.*

Important Discovery.

A curious discovery has just been made regarding the influence of iron on vegetables. Preparations of iron are used as medicine where the blood is poor in red particles. The pale cheeks of the invalid often regain their bloom under the influence of such tonics. It is the same, it appears, with plants. On the chalky soils of France and England, where there is an absence of iron, vegetation has a sere and blanched appearance. This is entirely removed, it appears, by the application of a solution of sulphate of iron. Haricot beans watered with this substance acquired an additional weight of sixty per cent. Mulberries, peaches, pears, vines, and wheat, derive advantages from the same treatment. In the cultivation of clover, wonderful advantages have been gained by the ap-

plication of the sulphate of iron on soils in which that ingredient is wanting, and in cases where it was desired to produce an early crop. The material is of course cheap, and the quantity applied small. All the scales falling around the blacksmith's anvils should be saved for the land—they are worth five cents a quart to the gardeners. No fruit is so much benefitted by iron rust in the soil as the pear.—*Selected.*

Flax and Hemp Manufactures.

The manufacture of flax-cotton goods has been successfully carried on by Messrs. Daniels & Co., at Lockport, N. Y., for some time. They have met with such reward for the enterprise that manufacturers farther East have, in some instances, changed their cotton goods mills so as to work flax.

Recent improvements have simplified the method of preparing flax-cotton so that it can be furnished at less than half the present price of cotton, and the demand for it has stimulated the erection of mills for the preparation of the article. Mr. B. O. Warner has constructed such a mill in Toledo, with facilities to manufacture 2,000 pounds per day, in the production of which 4,000 pounds of raw material are used. The flax-cotton is contracted to an Eastern house engaged in the manufacture of Satinet goods, at 35 cents per pound. The Blade states that the supply of flax for the mill is abundant, for which ten cents per pound is paid at the mill, and eight cents on railroad lines leading to Toledo. We wish the enterprise great success.—*Cleveland Herald.*

Hop Growing in Iowa.

You have not forgotten the series of letters which I wrote you several years ago, and which you published over the signature of an "Otsego Hop Grower," giving minute directions for the growing and curing of hops. Well, having some little knowledge gained from experience in cultivating hops in New York, I thought I would try the experiment and see if this soil and climate would produce good hops. Accordingly I have been experimenting (on a limited scale) for the past two years, with hops. My success in this line has been fully equal to my expectations. I have grown as good looking hops as any I ever saw, and they have yielded well; but, like most hops grown in the West, they are not quite as strong as the Otsego hop. The difference, however, is slight, and would only be discovered by persons who are familiar with hops. I am also the pioneer in hop growing, as none are raised in several counties around, except mine.—*Country Gentleman.*

A SNOW STORY.—Deacon Chamberlain of Nevin, Adams county, Ill. has a large flock of sheep. During a late snow storm many of them were whelmed in the snow, but were soon relieved. Twelve days after being thus relieved, the Deacon observed what appeared to be the crater of a small volcano, steaming up, but upon sounding discovered to his surprise one of his sheep patiently awaiting the resurrection day. It had been buried twelve days and thirteen nights! It appeared as usual, excepting an unusual partiality for corn.

Profit of Dwarf Pear Culture.

Has the success attending the culture of Dwarf Pears in Western New York been such as to promise profit if planted largely in orchards?

SHARPE—A neighbor of mine planted 104 dwarf pears. The third year after planting he sold \$50 worth of fruit. Another neighbor put out 400 bearing trees. The second year his crop brought him \$69 50; the third year he got but little from it; the fourth year \$175; this last year he received \$500 for his crop. Another neighbor planted an acre and one-eighth with dwarf pears. Some of these trees did not bear the past year, yet he sold his crop of fifty barrels at \$10 per barrel in the orchard—the orchardist to pick the fruit, and the purchaser furnish the barrels.

I think nurserymen have injured community by selling trees so low that they are never cared for. A man I know of bought trees for little or nothing, and paid for them with what he did not think of any value, and they are good for nothing now—worse than nothing. If I can make a good hole in a gentleman's purse when he comes to purchase trees, I am sure he will thank me for it. I tell them when they come to me and want to buy trees low, that they had better not buy at all.

J. J. THOMAS—Years ago, I was led to adopt the erroneous opinion that trees should only be planted in gardens. Now I am fully convinced they ought only to be planted in orchards. In gardens they are often neglected—the vegetables are cultivated but the trees are not. Hand hoeing and spade culture does not answer. The quince roots extend and the soil needs stirring. A dwarf pear orchard ought to be as large as a corn field, and cultivated as often or oftener—especially when they yield the figures given here. Horse cultivation will produce better trees. I would plant them 12 feet apart in the field—would grow them in large fields and give them horse culture.

SHARPE—I cultivated beans for two or three years in my orchard; but would not recommend it as a practice.

FISHER—These pear orchards that we have heard from are, I suppose, the best pear orchards in the country. It is not safe to base our recommendations upon their success. With me, with good culture, dwarf pears would not pay \$10 per acre. I do not believe that we are warranted in believing that 10 acres can be cultivated and net the orchardist \$200 per acre. I selected under P. Barry's advice, 16 varieties for a family and market orchard. Nearly all of them were dwarfs. They are fine, healthy trees. I have a gravelly loam soil with a clay sub-soil. These trees have been transplanted five years; and three-fourths of them have not borne a pear.

G. ELLWANGER—A different selection of varieties is made when one plants for market, than is made for an orchard for family use.

SHARPE—If the gentleman will plant Duchesse d'Angouleme and Louise Bonne de Jersey, 430 trees to the acre, they will produce for him a crop that will bring the figure I have named.

JUDGE LA RUE—Has any gentleman grown such crops five or ten years successively; or in other words, have dwarf pear orchards averaged such results that length of time?

FISHER—I can report only on half an acre. They

have borne more or less for years. Trees all good and healthy. I have 25 or 30 varieties—the Duchesse in considerable numbers, a few Seckles, and all dwarfs. But I have had no such result in figures as has been given here.

OLMSTEAD—In 1858 I planted 800 standard trees; in 1850, 600 dwarfs. From the standards the past year, I gathered 47 barrels; from the dwarfs, seven barrels. I sold the whole at \$10 per barrel. The standard trees cost me \$35 per 100; the dwarfs, \$30 per 100. The crops of beans taken from the ground have paid for cultivation. The crop of fruit the past year has paid the cost of trees and planting.

SMITH—I planted, about four years ago, 4,000 pear trees; three-fourths of them were dwarfs.—The latter were planted 10 feet apart; the former 20 feet apart. Crops grown on the ground between the trees paid for the culture. During the four years these trees have not produced five bushels. They did bear some fruit in spite of all I could do. They should never be allowed to bear fruit when only three or four years old.

FISHER—I do not wish to be understood as being dissatisfied with my pear planting, nor with what the trees have done for me; but I am not disposed to let the figures given here go out as being what every man may expect who plants dwarf pears.

J. J. THOMAS—There are such orchards as 10 year old dwarf pear orchards. I may name Mr. Yeoman's orchard of one-third of an acre, that has borne at different times \$400 and \$500 worth of pears—all from one-third of an acre. One year he sold his crop at \$35 per barrel.

FISH—The gentleman named by J. J. Thomas sold \$500 worth of pears from one-third of an acre one year.

SHARPE—He sold in two years over \$1,000 worth of pears from the third of an acre. They were Duchesse d'Angouleme. The two varieties I named will give the orchardist in five or six years from planting \$400 to \$500 per acre. I would plant 8 by 12 feet apart.

At this point a gentleman read a letter he had recently received from Mr. Yeoman, above named, in which he stated that his crop the past year was 70 barrels, which sold at from \$8 to \$20 per barrel.

AINSWORTH—I sold the crop from one acre of Virgalieu and Seckles for over \$400; they averaged \$15 per barrel.

FROST—I think it will be found to be the experience of most persons who have cultivated pears several—say eight or ten—years, that they have proved a total failure.

ELLWANGER—I have cultivated pears twenty years, and cannot agree with Mr. Frost. There is profit in pear culture.—*Report of N. Y. F. S. Ass. in Rural New Yorker.*

Sheep Chewing Tobacco.

CHESTER BAKER, of Lafayette, Onondaga county, New York—an experienced flock-master and as truthful a man as lives—informs us that he has fed thirty-two Merino breeding ewes with tobacco stems all winter—giving them about as many daily, as a man can carry at once in his arms! From the first the ewes greedily ate off the small and damaged leaves from the tops of the stems

themselves, the occasional damaged leaves on the butts, and they also usually peeled off the bark from the entire stems! The substance thus consumed taste strongly of tobacco, and will readily produce a decoction strong enough to kill ticks. Mr. BAKER has known a neighbor to do the same thing—and he proceeded on the theory that the sheep would not eat what was not useful to them. They have abundance of hay and other feed, and are not, therefore, induced by hunger to indulge in this strange appetite. We shall await the final result of this curious experiment with interest.—*Rural N. Yorker*

WEIGHTS AND MEASURES.

On the vexed question of what is the weight of an English bushel of wheat, Mr. David Ogden, of New York, sends the Department of Agriculture the following:

"I find on pages 22 and 23 of your last report a letter from C. W. Atkinson, respecting the weight of the English bushel of wheat. He is entirely mistaken in his postscript. Wheat was formerly sold in Liverpool, and is yet in London, at 70 lbs. to the bushel, or at 560 lbs. to the quarter of 8 bushels. I will give you an example. In 1856 I shipped 10,836 bushels of wheat, at 60 lbs. to the bushel; it weighed 650,160 lbs. It was sold in Liverpool for 9,278 bushels, at 70 lbs. to the bushel, and weighed 649,460 lbs. In this country we sell corn at 56 lbs. to the bushel; in England corn is sold at 480 lbs. per quarter of 8 bushels—60 lbs. to the bushel."

But we recur to this subject principally for the purpose of saying that Congress recognizes the importance of acting upon it, for the House of Representatives, at the present session, has added to its standing committees one on weights and measures. The Constitution of the United States confers on Congress the power "to coin money, regulate the value thereof, and of foreign coins, and fix the standard of weights and measures;" but so long as it allows State legislatures to declare how many pounds shall constitute a bushel of any commodity it fails to meet this requirement; for the words that it "shall have power" mean that it must exercise it. And, surely, few subjects of legislation, in times of peace, deserve more speedy or better matured action than this.

GREEN PICKLES—BEWARE OF THEM—THEY ARE ALWAYS POISONOUS.—Dr. Gerard Aving publishes in the *Rochester Democrat and American* a very sensible article upon the folly of the common practice of greening pickles, and tells how to detect the copper, which he says is a "beautiful and simple experiment, within reach of everybody." It may be conducted thus: Cut a greened pickle into small pieces, and put them in a glass of rain water, adding ten to fourteen drops of sulphuric acid; put the bright blade of a knife or any bright steel surface, in the liquid twenty four hours, and if the pickle contains copper it will be found upon the steel blade, as though it had been coated by the galvanic process. All pickles greened in brass or copper kettles, show this result. The green color comes from verdigris, which is a deadly poison. The quantity usually taken with pickles does not often kill, but it produces disease. Such pickles are

furnished to our soldiers in large quantities. Why are they colored? Only to please the eye, and make them represent green cucumbers. A poisonous pickle may be eaten upon a full stomach, it never should be upon an empty one. They should never be allowed among sanitary stores.

The Cold of January

Mr. John Hill, of Peterburg, Menard county, sends us the following report from Toulon Stark county:

January 1st,	30	degrees below zero.
" 2d,	23	" "
" 3d,	18	" "
" 4th,	7	" "
" 5th,	14	" "
" 6th,	21	" "
" 7th,	15	" "
" 8th,	22	" "
" 9th,	7	" "
" 10th,	3	" "
" 11th,	2	" "

He adds: "500 head of sheep perished under the snow-drifts in Menard county. All young pigs that were not very well protected died, either from the snow drifting or from the cold. Twenty-five per cent. of the sucking calves were lost. Many fat hogs, and those partially so, were smothered beneath the snow or died from piling—that is, piling on top of each other."

From *Hennipen county*, Mr. William Darley writes: "The peach trees in this county appear to be all killed by the severe cold weather of the first of January. Also some varieties of the apple."—*Report Com. of Ag.*

Poetry.

The World Going by Steam.

In the darksome depths of the fathomless mine
My tireless arm doth play,
Where the rocks ne'er saw the sun decline,
Or the dawn of the glorious day.
I bring earth's glittering jewels up
From the hidden cave below,
And I make the fountains' granite cup
With a crystal gush o'erflow.

I blow the bellows, I forge the steel,
In all the shops of trade;
I hammer the oar and turn the wheel
Where my arms of strength are made.
I manage the furnace, the mill, the mint;
I carry, I spin, I weave;
And all my doings into print
On every Saturday eve.

I've no music to weary, no breast to decay,
No bones to be "laid on the shelf:"
And soon I intend you may all go and play
While I manage the world by myself
But harness me down with your iron bands,
Be sure of your curb and rein;
For I scorn the strength of your puny hands,
As the tempest scorns the chain.

Editor's Table.

BAKER & PHILLIPS - - - PUBLISHERS.

M. L. DUNLAP, Editor.

SPRINGFIELD, ILLINOIS, APRIL, 1864.

The weeping skies of April, if not ornamental are useful, moisture is needful to expand the buds and to force the germ, we may therefore be well content with April showers. The question has not been fully settled, which of the two gives the most enjoyment, anticipation or participation. In spring we are busy planting, pruning and grafting, in anticipation of fine crops in Autumn. The realization of which is months hence, but the zest with which we now enter upon the duty, and the pleasure that we experience must surely be large, so large—well we will not decide this vexed question until the flowers shall have a chance to testify, vegetablesto display their delicate texture, the small fruits have tickled our palates with their rich acids, the larger fruits have proved their melting luciousness and the garners have been stored for winter. From now all along the bronzed highway of the summer months shall we watch for and anticipate and enjoy ourselves with vived pictures, not only well filled but set in rich borders.

DEAD SHEEP AND SHELTER.—Sad news of decimated flocks continue to come to us, the effects of the storm of January 1st. such practical and logical arguments and in such overwhelming numbers have never before been offered in favor of shelter. We suspect that it will be the cause of a severe run of barn and shed fever during the coming summer, In some flocks nearly half have been lost.

Talk of wintering sheep on the open praries, or in the corn stalk field, it is the hight of folly, tight yards sheds and barns must be had, or we may and will soon abandon sheep husbandry as not adapted to our climate. We shall look for a change of base in this respect, but it comes after the slaughter of the innocents.

GARDENING—This is the active month of gardening, in which we have a deal of planting weeding and hoeing to look after. Farmdrs should remember that upon a good supply of vegetables will depend the good health of their respecnive families.

BI-MONTHLY REPORT OF COM. NEWTON.—The Report for January and February is at hand, March 14th, and is exceedingly valuable. In this No. of the FARMER will be found several extracts from it. Persons wishing the Report should write the Commission of Agriculture.

BLACKBERRIES.—The Lawton so far as we can learn are killed to the ground. Our improved blackberry is partially killed but we intend to plant two acres of them this month.

GRAPES.—The grape fever rages and all sorts of vines good and indiferent are changing hands. In fact the poor sorts have the best of it as [the dealers] praise them with the most pertinacity.

TREE PROTECTOR.—Dr. Weed has shown us peach limbs cut from his trees under protection, having every bud perfect, and the bark and wood as perfectly green and beautiful as in autumn, presenting a very striking and favorable contrast with the blackened branches cut from trees outside.

From Mr. Hovey's Annual Review of the Progress of Horticulture in 1863, we quote the following commendation :

"Peaches without glass; on Mr. Weed's plan, are well worthy of attention. He has stated all the facts plainly, and we should be glad to see an attempt made to thoroughly test its value. Such a delicious fruit is worthy of every attention. It is only by this mode, or in orchard-houses, that a crop can be relied upon. The latter mode will give a small quantity of superior fruit, the former will supply it in abundance. Of orchard-house experience we hope to give more in our present volume."

WILL SORGO MAKE SUGAR.—F. L. Stewart, of Murreysville, Westmoreland Co., Pa., says that he has satisfied himself by numerous experiments of the following facts in regard to true, unadulterated Chinese cane.

I. The juice of this cane contains uniformly not less than 16 to 18 per cent. of true crystallizable cane sugar.

II. When completely ripe, all parts of the stalk of this cane contain crystallizable sugar—the juice from the lower half, however, being purer, richer in sugar, and more abundant than from the upper half.

III. No grape sugar (glucose) in appreciable quantity is found in the plant after it has fully matured.

IV. Any crystallizable sugar found in the sirup is a modified form of crystallizable cane sugar, the production of which is incident to imperfect methods of manufacture.

V. Crystallizable sugar cannot be extracted uniformly from the best cane, unless certain impurities contained in the juice be removed.

VI. The soil best suited to the growth of the plant and to its saccharine qualities, is a sandy loam or clay loam, or almost any good upland soil, such as is better adapted to wheat than to Indian corn. The most congenial climate seems to be that of which the mean summer temperature is about 75° Fah. It will ripen generally where the summer mean does not rise above 70°, as at Pittsburg, Cleveland, Chicago, Madison, Wis., and southern Minnesota.

VII. No more difficulty necessarily attends the manufacture of sugar from the sorgo than from the

Louisiana cane—the expense of production would be considerably less—the product equal in quality, and in quantity nearly equal to that obtained from the juice of the latter.

The method by which the results above stated were obtained is entirely different, however, from that pursued by the sugar-growers of Louisiana or elsewhere; it is specially adapted to the nature and peculiarities of the juice of the sorgo.

—A detailed account of the process is soon to be given, when we propose to know more in regard to this disputed subject which has thus far shown considerable thimble-rigging. We have had such promises before. Mr. Wray gave us a bookful of sugar making, but he did not succeed himself, even in the favorable climate of Georgia. Can sugar be made on a large scale from the sorgo, and at reasonable prices, so as to compete with Southern cane sugar, is the question. In regard to sirup the question is answered in the affirmative—now for the sugar.

Things in Egypt

William Nicholson of Floria, Clay Co., writes under date of March 6th: "This weather is hard on the winter wheat, which looks quite dead, but the roots appear in good order. I have been rolling my crop and it is rapidly improving.

I have never known such a yield of maple sugar in this part of the State as has been made this spring. The fruit buds of the peach and most of the cherry are dead; apples all right. Can you tell me where I can get a small lot of Barberry, Osage Orange and Chicory seed?"

—We have been expecting to hear of Osage seed from Arkansas before this time. Permits have been given by the Government for this purpose, but thus far we hear nothing of their progress. It is too late to get Barberry seed, which is gathered in autumn or early winter. For yard and roadside fences this plant will prove of great value. Its moderate, compact growth will make it popular.

Chicory seed can be had at the seed stores—We allow the seeds to fall off and prick out the plants which come up about the old plants.

Hops on the Prairie.

We have several letters of enquiry in regard to hop culture in the west, or rather why hops are not cultivated here. To these we might answer by asking why many other crops of prime necessity are not cultivated with us, but it will be more dignified to discuss the whys and the wherefores of the subject.

We have never seen a hop yard in this State nor do we know any person who has made the trial. We have heard vague reports of trials near twenty

years ago, that proved failures. The vines grew rampant but failed in the crop of hops. A small amount of hops are grown in the north part of Wisconsin, but the main supply comes from a few counties in the State of New York, of which Madison, Otsego and Montgomery stand foremost.

The want of poles and of shelter from high winds appear the great drawbacks to investing in this crop on the prairies. In New York the hemlock ridges and the tamarac swamps supply the poles, as hard wood is too heavy to handle to advantage and is seldom used. These last from seven to ten years, when the whole yard must be renewed at a heavy outlay. Of course this kind of timber is out of the question on prairie farms, and hop growing as a business must be postponed until such times as we can grow the poles. It is probable that the white willow will make a good hop pole, at least it looks to us to be the most available. To grow them will require at least eight years. The European larch (tamarac) grows freely on the dry cultivated prairie land, and though longer coming to maturity, will be found to be more durable than the willow. Our native larch (tamarac) delights in a wet soil, and grows well in any of our low lands. The question of hop poles is therefore a question of time, and we call the attention of farmers to the difficulty to be met at the threshold of the business. Aside from the poles we see no difficulty in the way, and that is only a question of time

Illinois Farmer.

When we have a leisure hour to devote to miscellaneous reading, there is no paper or periodical more acceptable than the ILLINOIS FARMER. We always pick it up in full confidence that we shall find some practical fact, hint or suggestion, on the fruitful subjects of agriculture and horticulture, that, acted upon, would greatly benefit the producing classes, and are rarely disappointed.

This favorite, however, is very irregular, of late, in its visits. We missed it entirely from our table for some months. Last week the January number came to hand. It was rather old, but still acceptable, as the proceedings of the winter meeting of the Illinois State Horticultural Society, which are given in full, are worth a year's subscription.—*Aledo Record*.

—Some of our readers as well as the *Aledo Record*, may be gratified to have the tardy appearance of the FARMER accounted for. It will be recollected that in December immense lists of the enrollment had to be printed in all the counties.—Springfield being the central point for this work of large populous counties, the office of the STATE JOURNAL in which the FARMER is printed, came in for a large share of this printing. No sooner was this off the hooks than a printers' "strike" made another delay; this was again followed by a large

amount of printing for the returned veteran regiments. It will thus be seen that the enrollment lists, the printers' "strike" and the blanks and other printing for the veteran regiments took precedence, and the *FARMER* came out last. These difficulties are now happily out of the way, and the *FARMER* will soon be again on time. At the best, it is difficult to keep up to time, from the fact that the editor is ninety miles distant from the office of publication, and as it must be more or less of a guess in regard to copy, it requires some days to make up the deficit of a short guess.—En.

Peach Trees in Egypt.

Dr. N. C. Meeker, of Dongola, Illinois, writes as follows to the Farmers' Club, of the American Institute, New York :

"I report to the Fruit Growers' Club the condition the peach trees have been left in by the cold weather here in Southern Illinois, where orchards of this fruit have been planted on an extensive scale, the largest being over a hundred acres.—Some parties were preparing to plant, this coming spring, from 10,000 to 50,000 trees, and others very many smaller lots. At first I paid no attention to my trees, and, though I heard that every tree in the county was killed, I did not believe a word of it. Not long ago, I saw a trustworthy fruit agent, who had been continually travelling; he informed me that if I would closely examine my trees, or any others all through this country, I would change my opinion. On cutting into the bark of young and old, thrifty and unthrifty, I find the bark and wood of the same color—that of wood which has long been soaked in oil; and this to within three or four inches of the ground. I have several hundred peach trees set out last spring, which were budded the fall previous—which, by the way, is the best way to plant this tree where they are moved but a short distance; they were well cultivated and made a fine growth; these are in the same condition, and, though we budded them very low, it will be a pretty tight squeeze for buds to start on the wood of the old bud. Trees of this kind show the best chance, and I should say all others are killed. It is likely they will sprout from the roots, and can be budded again, but it is thought they will have so rank a growth that the buds will be in danger of breaking off. More than this, the frost blight appears to be working downward, for it was generally reported that the trees were all safe below the snow line; the fact is, they are blighted at least ten inches below the snow line. They are withering day by day, and what seemed so thrifty during and just after the snow look as if only fit to be cut away and burned. Here we are, then, with our grand, semi-tropical cotton and peach climate, with a probable prospect of not seeing a peach for three years. But I am not much disappointed, I never had the peach fever very badly. Strawberries have been my hobby. But we must keep trying."

—It would appear by the above that the Dr. takes a rather doleful look of the subject. We think he is worse scared than hurt, as most of the trees we

think will recover, especially all the young trees. It is probable that many of the old trees that bore full crops last year are dead.

National Farms and Garden.

WASHINGTON, D. C., March 10, 1864.

M. L. Dunlap, Esq., Dear Sir :

I am exceedingly obliged to you for your kindness in transmitting a copy of your periodical to my address.

I propose trying various cotton seeds this spring, but our grounds are entirely too limited for the purposes of comparative experiment. We desire to have facilities for growing specimens of every kind of fruit, grain and vegetable, so that we can describe them accurately, establish synonyms, throw out useless varieties—in short, do for the farm and vegetable garden what pomologists have done and are doing for fruits. But we want a farm of a hundred acres, instead of a garden of five acres as at present.

Yours very respectfully,

WILLIAM SAUNDERS.

—The above letter from Mr. Saunders, Superintendent of the government gardens at Washington, is just to the point, and in a few words describes what we need

Many people suppose the object of these gardens and the contemplated farm is to get up a model farm and garden, but such is not the case. They are needed for experiment in testing new plants grown East and for the purpose of settling the value and nomenclature of the older or imperfectly known specimens.—En.

How to Grow Peaches every year.

An article is going the rounds of the papers, from a correspondent of the *Ohio Cultivator*, which, if followed, it is asserted, will insure a crop of peaches every year, beyond a peradventure, bidding defiance to all the usual casualties to which this delicious fruit is subject. The whole secret of the affair is summed up in the following: "Procure your trees grafted on the wild plum stock. The tree partakes of the nature of the plum, being hardy, and will *never winter kill*, and putting out late in the spring, *will never be injured by frost*. It is also a certain preventative against the workings of the peach grub, while the natural life time of the tree is beyond that of our own; so you may depend on peaches every year, and for a long period of time, without the destructive and discouraging influences attending the growth of the common peach.

There is the mystery of the whole matter in a nut-shell. Perhaps, if the said correspondent had lived forty years ago, he might have heard the same doctrine preached and practiced from to a very considerable extent in some parts of the coun-

try, when peaches were much more apt to "grow every year" than they now are. Thousands of these trees were then grafted and sold at two or three times the price of "*common peaches*," and yet, if they bore any more frequent than the common trees, the writer hereof never knew it, and plum rooted peach trees passed out of mind, until the discovery again comes up as something new and wonderful.

The wild plum stock has a slight tendency to dwarf the peach tree when budded on it. The natural vigor of the peach being somewhat checked, less sap is carried into circulation, and the wood may be a little more thoroughly ripened. So far as this effect is produced, the wood may be less liable to be killed by severe cold. But the buds of the peach will be influenced as early as by the warm days of winter and spring, and will swell as readily, and will be as susceptible of injury by frost, as if the tree stood on its own root. The peach, when grafted upon the wild stock, of most kinds, like the plum, when grafted on it, will be poorly sustained, and will be short lived. Neither is it a sure protection against the grub, though less liable to be injured by this insect than the more tender, fleshy peach root.

Where ordinary industry is exercised, which alone is entitled to reward, the peach worm offers no serious obstacle to the production of peaches. Five minutes time to a tree, removing the surface of the earth about the stem, in the month of September, when the worms are young and still upon the outside of the bark, they are readily killed by a slight rubbing with a piece of leather or old hat. Repeat the operation in early spring, using a knife in tracing out the worms, for at that time they will have eat their way under the bark.

In searching for the peach worm, just after a rain is the best time to accomplish the work, because the gum being swelled by the moisture, readily points out the location of the enemy.—H. P. B., in *Country Gent.*

The above humbug had a very good run in this State last season, trees selling at seventy-five cents each, on examination a large part of them were found to have been budded on the peach; of course, they were just as good if not better for it. Yet some of the victims feel a little sore over this part of it. Can any one tell us what will be the phases of tree peddling swindling for the coming season; It would seem that nearly everything had been exhausted, yet from the utility of these gentlemen we will have some new rich lode struck. Don't be discouraged gentle readers, you will have another deal yet. In this one county twenty two hundred dollars was paid for peaches, on plum stalks, Siberian crab and dwarf apple of the riding whip size, all at seventy-five cents each.

Adirondac grapes! at \$3.00 and others equally true to name at two or three dollars. Is not the Editor surrounded by an enterprising community of pomologists, and may he not feel fortunate in having his lot cast among such an enterprising people? Surely he feels as though his services

might at some time be appreciated, and in proof of this has the satisfaction of seeing the *Farmer* rapidly extending among them.

AGRICULTURAL IMPLEMENTS.—The Commissioner of agriculture says the total value of agricultural implements manufactured in the United States for 1860 was \$17,802,514—being an advance of 160 per cent. on the amount manufactured in 1850. Among these implements are some of the highest importance to the farms.

This shows a progress during the decade, but it is probable that this development of labor saving implements in our rural economy will be eclipsed within the next ten years.

Within the current year we are to have the pleasure of witnessing some very important improvements in old machines and several new ones now in the course of development.

Illinois State Agricultural Society.

ABSTRACT OF PROCEEDINGS

The Executive Committee assembled at the Rooms of the Society, in Springfield, on the 1st of March, 1864, pursuant to adjournment.

PRESENT.—President Van Epps, Vice-Presidents Rosenstiel, McConnell, Kile, Wait, Ozburn. Minutes of the last meeting were read and approved, and, on motion, the action of those present at the last January meeting (there having been less than a quorum), was in every particular ratified and confirmed. The report of J. H. Pickrell, Esq., Superintendent of Grounds at the last Fair, containing many valuable suggestions in regard to the economical management of his Department, was read and referred to a committee who subsequently reported favorably upon every recommendation.

A communication from the Macon Co. Agricultural Society, calling the attention of the Board to the supposed necessity for enlarging the premises and re-arranging the list in regard to the Sweepstakes and Herd rings with the Stock Department and also asking to have refunded to them the sum of \$175, claimed to have been erroneously paid out on Citizens' Prizes, was read and referred, the Board subsequently ordering the money to be refunded.

Cor. Sec. read a very able paper from President Edwards, of the Normal University, on "Agricultural Education." It is full of good thoughts and practical suggestions, worthy the distinguished author. Ordered, a vote of thanks.

Cor. Sec. also read a paper from the pen of Prof. Sewall, of the Normal University, on "Some of the chemical changes which take place in the germination, growth and decay of plants"—exceedingly in-

teresting and valuable, and elucidating scientific. ly, a subject little understood by those who need to understand it best. Ordered, a vote of thanks.

Cor. Sec. read a communication from Wallace Sigerson, Esq., of St. Louis, setting forth the importance of the passage of a law by the General Assembly of Illinois, requiring all stock to be kept within inclosures, and dispensing with the necessity for fencing, except for the purpose of such inclosures, which, on motion, was referred to a committee consisting of Messrs. Kile, Rosensteil and Ozburn, who subsequently reported that, in the opinion of the committee, such a law would not meet the approbation of a majority of the people of the State, but would be acceptable to the northern and a part of the central counties, and would recommend to the Board to petition the Legislature, at its next session, to pass a special act, allowing the citizens of any county, by direct vote, the privilege of impounding or otherwise requiring the confinement of their stock and turning their grain and grass fields out.

The Treasurer, John W. Bunn, presented his report for 1863, showing balance in his hands to the credit of the Society on the first of January, 1864, of \$2,033 11.

On motion of Dr. Kile, it was resolved that medals (gold and silver) be executed and forwarded to the parties entitled to them, under awards heretofore made, and that in all cases where a diploma has been heretofore awarded a silver medal be tendered in lieu thereof.

Delegates to State Fairs—Indiana State Fair—Dr. Kile and Cor. Secretary; Iowa State Fair, President Van Epps, Mattson and Whiting; Wisconsin State Fair, Ellsworth, Rosensteil and Holder; Missouri State Fair, Walte, Ozburn and Singleton; Kentucky State Fair, Brown, Johns and Webster.

Award of Premiums Completed.—For best gallon of sirup, made from Chinese Sugar Cane, Thos Bradbury, Griggsville, Pike county, \$10.

For the best gallon of sirup made from Imphee or African Sugar Cane, J. H. Smith, Quincy, Adams county, \$10.

For the best cheese under one year old, Chas. H. Rosensteil, Freeport, Stephenson county, \$10.

For the best fresh butter in rolls, Chas. H. Rosensteil, Freeport, Stephenson county, \$5.

National Department of Agriculture.—It was, on motion,

Resolved, That the United States Department of Agriculture, in the efforts put forth to diffuse needed information among the farmers, is entitled to our continued sympathy and approval.

Resolved, That its existence, with constantly increasing power having been maintained for nearly

two years in an atmosphere teeming with adverse and unfriendly influences, inspires us with the hope that, at some time in the future of our progressive race and nation, the politicians of the country will be driven, willing or unwilling, to recognize and regard the fact, already apparent to the rest of mankind, that to agriculture and the mechanic arts this people must mainly look for progress, in all that conduces to the material wealth and prosperity of the United States.

Resolved, That we tender to the present head of that department, Hon. I. Newton, and his chief clerk, Hon. James S. Grinnell, and their successors the assurance that we will always be ready to acknowledge the value of their labors and extend to them whatever of influence we may possess to assist in enlarging the sphere of usefulness of the department and to increase its efficiency.

Ordered, That a copy of these resolutions be forwarded to the department.

Pleuro Pneumonia.—James N. Brown, the Standing Committee of the Society on diseases of cattle and other stock, to whom has been referred letters of Dr. A. M. McFarland to Gov. Yates, and communication of Chas. L. Flint, Esq., to Gov. Andrews of Massachusetts, in regard to the continued and alarming prevalence of this disease among the heads of the latter State, reported,—that he had given the subject due consideration, that he had seen no good reason to alter his opinion formerly expressed to the Board, as to the highly contagious character of the disease, and the ever-present danger of its importation to this State by bringing stock from the infected districts, and suggested that a committee be appointed to confer with His Excellency, Gov. Yates, in regard to the best means to be adopted to prevent its introduction. Committee appointed—James N. Brown, A. B. McConnell, and Corresponding Secretary. (Gov. Yates left the city, to remain some days, before the Committee had an opportunity of seeing him.) It was *Ordered* that the report of Mr. Brown, heretofore made to the Board on this subject, be republished in next issue of Society's Journal.

Miscellaneous Entries at the Fair of 1863.—These were examined and the recommendations of the Awarding Committees, with few exceptions, confirmed.

Duty on Imported Wool.—On motion of Mr. McConnell.

Resolved, That justice to the interest of the wool growers of the United States demands that a duty of at least ten cents per lb. be levied by act of Congress on imported wools; and that we respectfully request the Senators and Representatives from this State in Congress to favor the passage of a law to that effect.

Election of Officers of the State Society at the next Fair.—It was *Ordered* that the Corresponding Secretary be directed to issue a circular to the County

Agricultural Societies of this State, calling their attention to the election of officers of this Society to take place at the next Fair, and earnestly urging upon each of them the appointment of three delegates for that purpose.

Accounts were audited and other business, not of general interest, transacted, when on Thursday morning the 3d inst., the Board commenced the revision of the rules, regulations and premium lists for 1864. This occupied their undivided attention until the adjournment on Saturday the 5th.

It is not possible in this brief abstract to indicate the many changes and improvements made. The published list will be distributed during the month of April, and it is hoped, will meet the approbation of all who feel an interest in the development of the industrial resources of the State. In amount the premiums are considerably increasing over last year's list, and, in designating the objects, the board have endeavored to fully realize the varying conditions and practical wants of the people and of the country.

It will be borne in mind that the Fair of 1864 will be held at Decatur, commencing Sept. 12th, that the grounds themselves, beautiful and convenient as they were last year, will be greatly improved and ornamented; that the railroads will continue to extend the usual facilities to fair-goers—*Passengers at half rates articles for exhibition free.*

Superintendents of departments.—Class A, Cattle—R. H. Whiting, and Lewis Ellsworth.

Class B, Horses—J. W. Singleton, and C. W. Webster.

Class C, D, and E, Sheep, Swine and poultry,—A. B. McConnell.

Class F, Mechanical—Wm. Kile, and H. C. Johns.

Class G, Farm Products—H. S. Ozburn.

Class H, Wm. S. Wait, and C. H. Rosenstiel.

Class I, Musical Instruments, and L, Natural History, R. H. Holder.

Class K, Textile Fabrics—A. J. Mattson.

Class M, Plowing Match—Uriel Mills.

Superintendent of Grounds.—J. H. Pickrell.

Respectfully, JOHN P. REYNOLDS.

Cor. Sec. Ill. St. Ag'l Society.

AGRICULTURAL ROOMS,
Springfield, March 12, 1864.

Clark's Sorgo Journal.

This journal, now in its second year, is doing a good work. It is a live, practical work and should be in the hands of every cane grower. Address Clark's Sorgo Journal, Cincinnati, Ohio, and enclose \$1.

Tobacco in Illinois.

OFFICE OF THE ILLINOIS CENTRAL R. R. Co.

New York January 30, 1864.

DEAR SIR: You did me the favor last year to send me a large package of tobacco seed, which was carefully distributed in Southern Illinois. I am sorry that I am not in possession of any special report of the out-turn of this seed; but I have no doubt that its distribution has been of great benefit. In our freight statistics for the year we notice large increase in the weight of tobacco forwarded, and it may interest you to see the quantity from various stations, which I annex below:

	Pounds.
Ashley.....	272,900
Coloma.....	82,500
Tamaroa.....	315,560
Du Quoin.....	438,640
De Soto.....	124,260
Carbondale.....	4,254,000
Makanda.....	420
Jonesboro'.....	577,370
Cobden.....	430
Dongola.....	220,910
Ullin.....	4,450
Pulaski.....	26,540
Cairo.....	3,408,280
Total.....	9,726,260

Very respectfully yours,
W. H. OSBORN.

ISAAC NEWTON, Esq.,
Commissioner of Agriculture.

The above is a very satisfactory exhibit, when we take into consideration the severe drouth and early frost of the season. To Mr. Osborn Prest. of the Illinois Central R. R. much credit is due for this result, in the furnishing of seed and otherwise encouraging the culture of this staple. We regret that cotton has not also shown as good returns from the efforts of Mr. O. but we shall yet see good results from it. It is probable that the large amount from Cairo came from the adjacent States of Kentucky and Missouri. That at Carbondale was all the product of this State.—*Ed.*

FRUIT TREES IN HEDGES.—Pears and various varieties of fruit are grafted into the hedges, in many provinces in France not that the proprietor anticipates enjoying the fruit. They call them God's part (*la part de Dieu*). In the quince hedges of the Prince of Desdigne, branches to bear fruit are allowed to grow and form little trees, bearing quite an amount of fruit "boquets of trees," M. Gagnain assures the editor of the *Revue Horticole*, "hanging gracefully in the midst of the hedges, produce a beautiful effect and render the scene less arid, being at the same time elegant and productive."

PLUM TREES.—The best soil for plum trees consists of a heavy clay loam, and then a gravelly soil, while a sandy ground is the poorest of all, and also the worst for the presence and ravages of the curculio—that shy and destructive plum enemy,

Special Notices.

AGENTS.—We do not appoint any agents—all are voluntary. Any person so disposed, can act as agent in any place.

ENLARGE YOUR CLUB.—Will not the friends of the ILLINOIS FARMER inquire how many copies of the FARMER are taken in their respective offices, and pass around among those who ought to have their names added to the list? Our terms are so low to clubs of ten and twenty that we ought to have one or the other made up at every office in the State, and at every office in Central Illinois, one of twenty or more. Will our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?

TO SINGLE SUBSCRIBERS.—You receive the only copy of the FARMER that goes to your post office. Can you not send one, two, three or more new subscribers, without any trouble? Try. Sample numbers, etc., sent free.

DRAFTS.—Those remitting us large amounts of money, will please send us drafts on Springfield or Chicago, less they exchange. If you send cash in a letter, be sure that it is well sealed and well directed, to Bailhache & Baker, Springfield, Illinois.

THE FARMER AS A PRESENT.—Any of our subscribers who wish to make a present of the ILLINOIS FARMER for 1863, can have it at the lowest club rates, when out of the State. For fifty cents you can treat your Eastern friends to a Western Agricultural Paper. In no way can you invest that amount to so good advantage to emigration.

SEND NOW.—Any person who remits pay for a club of ten or fifteen, or any other number at the specified rates for such clubs, can afterwards add to the clubs, and take advantage of the reduction. Thus a person sending us five subscribers and three dollars, can afterwards send us three dollars more and receive six copies.

TO THE CASUAL READER.—This and other numbers of the ILLINOIS FARMER will be sent to many persons who now use it for the first time. Will they not examine it, and if they like it, subscribe for it, and ask their neighbors to subscribe? Sample numbers, prospectuses, etc., sent free to all applicants. See terms elsewhere.


HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighborhood, can easily make up a club of five, ten or twenty, but no time should be lost in doing so, for your neighbors may send east for their


paper which, though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us Western farming.


HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage:


1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it.
2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them.
3. Get post masters interested. They see everybody, and are efficient workers.
4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers.
5. Begin now, before the agents of Eastern papers get up their clubs.

This last hint is especially important. Let us hear from you soon. See terms elsewhere.

 Clubs may be composed of persons in all parts of the United States. It will be the same to the publishers if they send papers to one or a hundred post offices. Additions made at any time at club rates. We mail by printed slips, which are so cheaply placed on the papers, that it matters little whether they go to one or a dozen offices.

 Correspondents will please be particular to give the name of the post office, county and State.

 Specimen numbers will be sent gratis, upon application.

 Address

BAKER & PHILLIPS,
Springfield, Illinois.

SPECIAL NOTICE.—For terms see prospectus on last page. All exchanges and communications for the eye of the editor should be directed to ILLINOIS FARMER, Champaign, Illinois. Electrotypes and business matters, and subscriptions, to the publishers, Springfield, Illinois. Implements and models for examination should be sent to the editor. The editor will, so far as it can be done personally, test and examine all new machines and improvements submitted to his inspection. He will be found at home, on his farm, nearly all of the time. So far as it is possible, the conductors on the Illinois Central Railroad will let off passengers at his place, which is directly on the road, three and a half miles south of the Urbana Station, now the city of Champaign.

Advertisements.

FURST & BRADLEY,

MANUFACTURERS OF

PLOWS

AND OTHER

Agricultural Implements,

Nos. 55 and 58 North Jefferson Street,

near Corner of Lake Street,

CHICAGO, ILLINOIS.

Plows of all sizes and patterns, Cultivators, Horse Hoes, Harrows, Corn Shellers, Straw Cutters, Garden and Rail Road Wheelbarrows, Road Scrapers—five different patterns—Sulky Corn and Grain Cultivators, Sulky Hay Rake, with steel wire teeth revolving.

Send for a priced Catalogue.

FURST & BRADLEY

April-64-1y*



NANSEMOND SWEET POTATO PLANTS,—strong and well rooted, from May to July. Put up to carry 1000 miles in good order. Price, 300, \$1.00; 1,000, \$2.50; 5,000, \$11.00; 10,00, \$20.00. My plants of this variety produce good crops at the North.

Send for my circular of directions for cultivation, &c. Address **M. M. MURREY,**
Fruit Hills, near Loveland, Ohio.

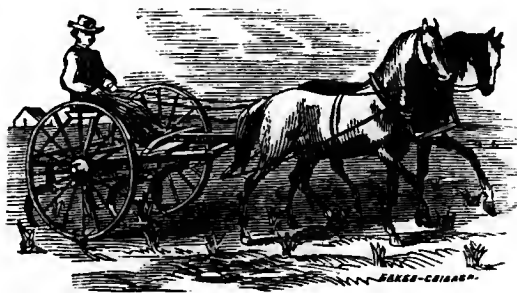
WEEED'S TREE AND PLANT PROTECTOR WILL protect trees against injury from AUTUMN, WINTER OR SPRING FROSTS, and secure an annual crop of Peaches, Apricots, Nectarines, Heart Cherries, Blackberries, Strawberries in any part of the Central or Northern States; and prevent all loss of trees or plants by *Winter killing*.

Patented Oct. 21st, 1862, and Dec. 8th, 1863,

JAMES WEED,
Muscatine, Iowa.

April-64-3mo*

GET THE BEST



STAFFORD'S

FIRST PREMIUM

CULTIVATOR.

The only one combining all the Mechanical Principles necessary to a

PRACTICAL AND SUCCESSFUL OPERATION

IN THE FIELD.

The lateral or self-adjusting motion of the plows and is an effectual

BAR AGAINST BREAKING,

When it comes in contact with unseen obstacles.

It is Made of the Best Material,

BY EXPERIENCED WORKMEN.

THE SHOVELS OF FIRST QUALITY

OF

CAST STEEL.

Altogether, it far excels all others in point of

Utility. Durability and

WORKMANSHIP.

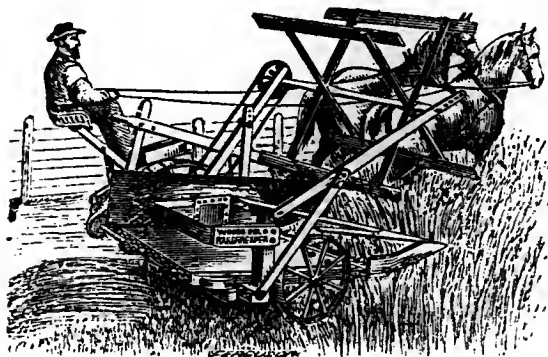
Price \$50 cash on board the cars at Decatur.

Send for Descriptive Pamphlet.

BARBER & HAWLEY,
Manufacturers,
Decatur, Ill.

March, 1864—3m.

VICTOR OF THE WEST.

 WOOD'S
 SELF RAKER,


COMBINED AND SINGLE.

This Machine has won for itself the enviable title of "Victor" having vanquished all the self raking machines made or sold in the West, at the

GREAT DIXON REAPER TRIAL,

held under the direction of the Ill. State Agricultura Society, which was the largest and most thorough field trial ever held in this country—over forty machines entering for competition.

W. A. WOOD'S SELF RAKER

was awarded the *first* prize as a Reaper.

Again, at the DeKalb trial last season, where there was a great struggle among all manufacturers for three days in the field, W. A. Wood's received

THE FIRST PRIZE

again as a Reaper.

This Machine is warranted to be the lightest draft Reaper made.

The most simple and durable.

Having the least side draft, and

Being the best Self Raker in the world.

Making a gavel any size at will of driver.

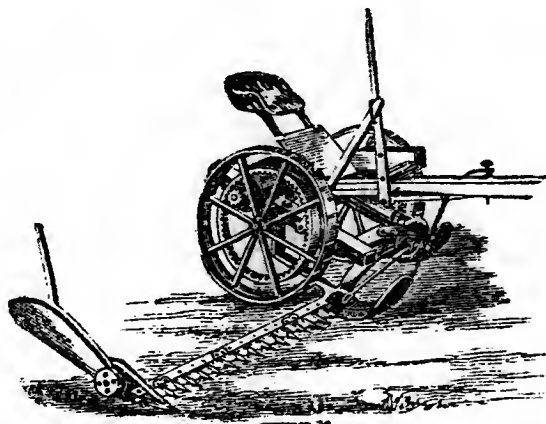
For further particulars send for Circular.

CHARLES E. WHITMAN.

General Western Agent,

206 Lake St., Chicago.

CHAMPION OF THE WORLD.

 WOOD'S PRIZE MOWER.


The superiority of Wood's Mowing and Reaping Machines is now fully established, both in this country and Europe.

The Prize Mower, of which there were made and sold over Six Hundred last season—a larger number by far than was made by any other manufacturer in the world, yet the demand is not supplied—is offered this season with many valuable improvements. (See Pamphlet.)

To Wood's Prize Mower has been awarded more high premiums than any other Machine during the sametime.

POINTS OF SUPERIORITY.

It is the lightest draft mower in use.

It is the most simple machine made.

It is the most durable.

It has no side draft.

It has no weight on horses' necks.

It will cut all kinds of grass without clogging.

It is sold at a very low price.


It cuts very close to the ground.

For full particulars call on Local Agents, or send for pamphlets to

CHARLES E. WHITMAN,

General Western Agent,

206 Lake St. Chicago.

 Large stock of Extras constantly on hand.
 April-3mo

FRUIT TREES.

HAVING largely increased my variety of

NURSERY & GREEN HOUSE STOCK,

I am now prepared to fill orders for

FRUIT & ORNAMENTAL TREES,

A new and complete assortment of

Grapes, Strawberries,
Raspberries, Currants,

And all other kinds of

SMALL FRUITS.

Also—A Full Assortment of

GREEN AND HOT HOUSE PLANTS,

FLOWER AND VEGETABLE SEEDS,

Bouquets and Cut Flowers,

GOLD FISH,

and all kinds of

Ornamental Work.

All orders addressed to

J. S. COOK,
Box 1029, Cin. O.

will receive prompt attention.

Seed Store, 197 and 199 Walnut st.

February, 1864. 4m.

ONLY

TWENTY-FIVE CENTS A YEAR.

THE CULTURIST,

A handsomely illustrated monthly Journal, devoted exclusively to

AGRICULTURE AND HORTICULTURE.

Specimen copies furnished without charge. Address Editor and Publisher,

A. W. SPANGLER,
No. 25, North 6th st.,
Philadelphia.

Feb., 1864—3m*

HOVEY'S AGRICULTURAL WAREHOUSE AND SEED STORE.

Has one of the best selected stock of implements and seeds to be found in the West.

A. H. HOVEY,
Nov 1862 No. 194, Lake st., Chicago Ill.

GROVER & BAKER'S SEWING MACHINES were awarded the highest premiums at the following State Fairs of 1863, for the Best Family Sewing Machine, the Best Manufacturing Machine, and the Best Machine Work:

NEW YORK STATE FAIR.

First Premium for Family Machine.
First Premium for Double Thread Machine.
First Premium for Machine Work.

VERMONT STATE FAIR.

First Premium for Family Machine.
First Premium for Manufacturing Machine.
First Premium for Machine Work.

IOWA STATE FAIR.

First Premium for Family Machine.
First Premium for Manufacturing Machine.
First Premium for Machine Work.

MICHIGAN STATE FAIR.

First Premium for Family Machine.
First Premium for Manufacturing Machine.
First Premium for Machine Work.

INDIANA STATE FAIR.

First Premium for Machine for All Purposes.
First Premium for Machine Work.

ILLINOIS STATE FAIR.

First Premium for Machine for All Purposes.
First Premium for Machine Work.

KENTUCKY STATE FAIR.

First Premium for Machine for All Purposes.
First Premium for Machine Work.

PENNSYLVANIA STATE FAIR.

First Premium for Manufacturing Machine.
First Premium for Beautiful Machine Work.

OHIO STATE FAIR.

First Premium for Machine Work.

The above comprises all the Fairs at which the GROVER & BAKER MACHINES were exhibited this year. At nearly all of them the leading Sewing Machines were in competition.

The GROVER & BAKER S. M. Co. are the only parties who manufacture and sell Machines which both SEW PERFECTLY and EMBROIDER PERFECTLY.

GROVER & BAKER S. M. COMPANY,

115 Lake Street, Chicago.

Jan 18. 64-ly

THE AMERICAN HOG TAMER—

Invented by Reuben Hurd, a farmer of twenty-seven years experience in Illinois.

My Tamer will stop any hog on earth from rooting, from a pig to an old hog by one simple application.

By any one sending three dollars to Reuben Hurd at Morrison, Whiteside county, Ill., he will receive one free of freight; and I will warrant them to give perfect satisfaction, or money refunded.

To those sending: Please name the railroad station you wish them shipped to, as I keep a constant supply on hand, and will be able to fill all orders with promptness and dispatch.

Directions for using will accompany all orders.

REUBEN HURD.

Nov. 1, 1863—6m.

EVERGREEN SEEDLINGS.

A very large stock of superior grown Evergreen Seedlings, at less than one-half the Eastern Prices.
PER 1,000.

NORWAY SPRUCE, two years old,
three to five inches, \$5,00

NORWAY SPRUCE, three years
old, six to nine inches, \$8,00

SCOTCH PINE, two years old,
three to five inches, \$7,00

AUSTRIAN PINE, two years old, \$2 per 100.

BALSAM FIR, RED CEDAR, ARBÄRVITÆ, &c., &c.,
of large or small size, at very low rates.

A large stock of CONCORD GRAPES, one of the
best varieties for the West.

A large stock of RED DUTCH CURRANTS, the
best for market, two to three years old, at half the
usual rates.

STANDARD AND DWARF PEARS, of well
tested varieties, together with a good assortment of
Fruit and Ornamental Trees, &c., &c.

Send for Catalogue. ROBT. DOUGLAS.
WAUKEGAN, ILL. tf

TO GRAPE GROWERS.

The subscriber has a large stock of the most vigor-
ous growth layers of the following desirable varieties,
which he will sell at very low rates, to wit:

CONCORD. \$55 per 1,000.

A few thousand of bearing age, of large size at
\$75 per 1,000.

These will produce a good crop the second year.

HARTFORD PROLIFIC, \$10 per 1,00, or
ten for a dollar.

REBECCA, \$10 per 100.

DIANA, \$10 per 100

The above will be well packed,
to go any distance.

TERMS—Cash, or approved bank paper o
short date.

JAMES SMITH.

DESMOINES IOWA, Jan. 1, 1863.

**WANTED.
KNITTING MACHINES.**

Every Farmer to know that his "Women Folks
can earn \$6 to \$20 per week with one of Akin's Cele-
brated Knitting Machines. It will earn its cost in
thirty days. Price complete \$75. Weight 45 pound.
Freight from 50 cents to \$1 50. Send for circular
and samples, (send stamps.)

BRANSON & ELLIOT,
General Agents,
Apr '63 ly 120 Lake street, Chicago, Ill.

**BLOOMINGTON NURSERY
BLOOMINGTON, ILLINOIS.**

Eighty Acres Fruit and Ornamental Trees.

200 NAMED SORTS TULIPS, ALSO HYACINTH:
Crocons, and a general assortment of Bulbs
and Flower Roots for Fall and Spring planting.
Nursery stock, Evergreens, Greenhouse and garden
plants—all at wholesale and retail at lowest cash
rates.

For particulars see Catalogues or address subscriber
F. K. PHENIX.

Bloomington, Ill., Aug. 1, 1859.

Dunlap's Nursery.

This nursery has good atock of apple trees of all
ages and of choice varieties for the west, low heads
and stacky. The genuine "May Cherry," (Kentish
or Early Richmond of Downing,) Dwarf and Stand-
ard Pears, the Purple Cam. Raspberry, the best of all
raspberries for the farm; Lowton Blackberry, Hough-
ton Gooseberry, Grapes, Strawberries, Ornamental
Trees and Plants. An immense stock of Silver Leaf
Maple, from \$5 to \$15 per 100, 6 to 10 feet high. The
green house is well stocked with roses and other bud-
ding out plants. This stock is grown to retail and
not adopted to the tree peddler, as all trees and plants
are large, stacky and thrifty, and intended for the
plan'er only. Terms cash with low prices.

Address, M. L. DUNLAP,
Champaign.

March 1, 1863.tf

ROSS, THOMPSON & CO.

(Successors to G. S. Thompson.)

CAPITAL PENSION & BOUNTY AGENCY.

OFFICE ON WEST SIDE OF 5TH STREET,

Opposite State House, over L. Greeble's Clothing Store

SPRINGFIELD, ILLINOIS.

BOUNTY AND BACK PAY, PENSIONS, RECRUITING

CLAIMS, CLAIMS FOR HORSES LOST IN

SERVICE, ARREARAGES OF PAY

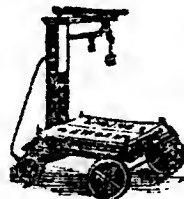
DUE RESIGNED OFFICERS,

&c., &c., &c.

Our experience and acquaintance with the details
of business in the various departments, and the per-
sonal attention of one member of the firm at Wash-
ington, afford us every facility for the prompt collec-
tion of all classes of military claims.

If you have any claims of any description against
the government, give us a statement of the facts, and
we will tell you what your rights are in the case. A
letter of inquiry may save you much trouble, expense
and perhaps loss. All communications enclosing a
stamp for return postage promptly answered. In-
formation gratis. No fees charged until money is
collected. Charges low. Pensions for \$5, as regula-
lated by act of Congress. Address

ROSS, THOMPSON & CO.,
Capita Pension and Bounty Agency, Springfield, Ill.
dec63-tf



FAIRBANKS'
STANDARD
S C A L E S
OF ALL KINDS.

Also, Warehouse Trucks, Letter Presses, &c.

FAIRBANKS, GREENLEAF & CO.
172 LAKE STREET, CHICAGO,

Sold in Springfield by

E. B. PEASE.
Be careful and buy only the genuine. i mel-ly

The Illinois Farmer,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE.

PUBLISHED AT

SPRINGFIELD, - - ILLINOIS,

BY

BAKER & PHILLIPS,

AND IS EDITED BY

M. L. DUNLAP, Tribune's Rural.

TERMS IN ADVANCE.—\$1 a year; two copies 1 50c; five copies \$3; ten copies \$6, and one to getter up of the club twenty copies \$10.

It is not necessary that the club should all be at one office—we send wherever the members of the club may reside.

The postage on the FARMER is only three cents a year in the State of Illinois, and six cents out of it.

Specimens numbers sent free on application.

Subscription money may be sent at the risk of the publisher.

Exchanges and communications for the eye of the Editor should be addressed, ILLINOIS FARMER, Champaign Illinois.

All business letters are to be directed to the publishers, Springfield.

TERMS OF ADVERTISING:

	1 mo.	3 mo.	6 mo.	12 mo.
One page, or two columns.....	8	\$20	\$35	\$50
Half a page or one ".....	5	12	20	30
One fourth page or half column..	3	7	12	18
One eighth or one fourth ".....	2	4	7	10
One square of ten lines.....	1	2	4	7
Card of five lines one year.....				\$5 00
Ten cents a line for less than a square each insertion.				

All worthy objects advertised, and those of importance to the Farmer will receive, from time to time, such editorial notices as the Editor may consider them worthy of, without additional charge.

Implements and seeds to be tested should be sent direct to the Editor, at his residence, Champaign.

We have put the price of advertising within reach of all. It will enable those who like to freely advertise their goods, to do so at a cheap rate.

Terms, cash. Yearly advertisers will pay semi-annually, and all transient advertisements must be accompanied with the cash to insure insertion.

BAKER & PHILLIPS, Publishers,
 Springfield, Ills.

THE ILLINOIS STATE JOURNAL

IS CONFIDENTLY OFFERED TO THE PEOPLE OF Illinois as the best and most reliable news, political and commercial paper within their reach. It is published at Springfield, the Capital of the State, and is the medium of all official notices, published by State authority. Particular attention is given to commercial affairs and every number contains copious reviews of the markets in the principal cities.

TERMS:

One copy one year.....	\$2 00
Three copies one year.....	5 00
Six " ".....	7 50
Ten " ".....	12 00
Twenty " ".....	20 00

Payable always in advance. Persons sending clubs of ten and upwards shall be entitled to an extra copy.

Address **BAKER & PHILLIPS,**
Springfield, Illinois.

Sanford & Mallory's Flax and Hemp Machines.

These celebrated machines are on exhibition and in operation in a building adjoining the Chicago Sugar Refinery. For circular telling all about them, price, &c., address

NELSON STILLMAN,
General Agent, Chicago, Ill.

P. O. Box 5823.

May 1 '63. 1y

A GOOD INVESTMENT.

ONE THAT PAYS.

THE

"PRAIRIE FARMER,"

Has now been published in Chicago, Ill., for twenty-two years, without intermission. It is devoted to the Producer's interests, treating of

GENERAL AGRICULTURE,

STOCK RAISING,

HORTICULTURE and POMOLOGY,

And DOMESTIC ECONOMY generally.

The Publishers' aim will be to give such information and assistance as will enable the farmer to grow the largest crops with the least expense, and what is equally important to assist him in securing the

LARGEST PRICES

the market affords, by giving such reliable information that is obtainable concerning the markets at home and abroad—the cost of forwarding produce to market, and other attendant expenses—thus enabling the producer to take advantage of the conditions of the market in dispensing of his produce.

FORM OF PAPER.

The paper consists of 16 pages large quarto, making a convenient size for binding and reference. A full index is given at the end of each six months.

CONTENTS.

About five pages are devoted to General Agriculture; one to two pages to Horticulture; one page to Literature; two or more pages to General War Miscellany and News; two pages to Markets and Record of Season, and asking and answering questions, and general editorial items.

A portion will also be devoted to Advertisements of such character as is appropriate to an Agricultural paper.

DR. GEO. H. DADD.

This celebrated Veterinary Surgeon will contribute regularly to the FARMER, giving especial attention to the answering of questions and giving information upon matters interesting to stock growers.

A NEW VOLUME

Commencing January 1st, 1863, and the present time affords the best time to form clubs for the year.

One copy one year.....\$2 00

Two copies one year.....3 00

Larger clubs furnished at liberal rates, or premiums given where clubs of six or more are sent at \$1 50 each.

Specimen copies and show bills sent to any one who desires them for examination or the purpose of raising a club.

For sale by news dealers generally.

For samples or other information concerning the paper, address

EMERY & CO., Chicago, Ill.

THE ILLINOIS FARMER.

VOL. IX.

SPRINGFIELD, ILL., MAY, 1864.

NO. 5.

The Illinois Farmer,

DEVOTED TO THE

FARM, THE ORCHARD AND THE GARDEN,

PUBLISHED BY

BAKER & PHILLIPS,

SPRINGFIELD, - - - - - ILLINOIS.

M. L. DUNLAP, Editor.

All business letters should be addressed to the publishers.

✍ EXCHANGES and all matters pertaining to the editorial department, must be directed to ILLINOIS FARMER, Champaign, Ill., as the editor resides at that point, and is seldom at the office of publication, from which he is distant over eighty miles.

* * For terms see prospectus and special notices in advertising department.

May.

May crowned with vernal Flora is always welcome. It is the last month of spring, that sends out tree and plant full-robed, for summer. Now the orchards are sheeted with bloom and the pastures carpeted with the richest grass; the gardens give their first offerings of radishes, of peas, of lettuce, of onions and other vernal vegetables, and will have the strawberry and May cherry ready to greet the incoming of June. May has no idle hands, for she keeps them all busy; she must make amends for the tardiness and fickleness of March and April; she must bring forward and finish up what they have

neglected; but bright, smiling May is competent to the task, and she will turn over to the keeping of summer whatever the husbandman placed in the hands of March and April, to perform or to turn the unfinished task over to her willing hands.

Proudly the farmer boy drives his new sulky cultivator astride the rows of corn, or marks out the rows and covers the potato, that crop which to him had always been a dread, now assumes a new aspect. Father has cut the seed potatoes and Brother John drops them along the tiny furrow made by the Stafford—one bout opens the furrow and another has covered the seed far better than it can be done by the use of the hoe. Let us see: this is at the rate of four acres a day—just what John can drop. When the plants first make their appearance above ground, harrow lengthwise the rows and roll them; when, a few days later, the sulky takes them in hand, and once a week thereafter until the blossoms are ready to open; they will then be nicely ridged up, clean and thrifty—thanks to the new sulky. The rows of beans, melons and other garden truck, have been dressed out in the highest style of the art, and our farmer boy looks over the work in triumph. When the team is turned out at night he is not tired out, his legs do not drag heavily, and he enters the family sitting room cheerful and elastic; an

hour at the melodeon, in conversation, reading the daily paper or the ILLINOIS FARMER, and he is ready for a sound and refreshing sleep; not the fitful, starting, overworked condition of the boy without the sulky cultivator, but the sweet, quiet sleep of needed labor. What farmer will not provide his son with one of these great labor saving implements?—what farmer mother who will not feel proud of her boy, doing the work of two men who use the old implements?

The prairies were mapped out and made expressly to give Genius a clear field for her ambition, and she is nobly filling it. See what she has sent us for the coming harvest. First in the row is "Wood's unrivalled Prize Mowing Machine, No. 1." Two horses are to work this at the rate of six acres a day in grains, and eight in clover and Timothy; and our boy who has tended the corn is to run it, while Joseph with old Kate is to do the raking with "Furst & Bradley's Sulky, Wire Steel Tooth Mowing Rake." Next in the row is the time honored J. H. Manny reaper, made by Emerson & Co., Rockford, with Burson's binder attached, containing all the new improvements.

We do not use these in May, but you see they are on hand, for it is part of the duty of May to have things ready for summer; for if it is fitting that May turn her tender plants over to be ripened up by summer, the proper tools and implements should go with them.

But we must go back to the actual work of May. The gardens must be weeded out, the weeds along the rows pulled up—well, no; suppose we cut them just below the surface with a thin-bladed, keen-edged knife. Gardeners sometimes get these made, but a few

days since we found just the thing, and what do you think it was? We have no name for it, but it is used by blacksmiths and horse doctors to pare the horses' feet. It is a crooked knife with a crooked handle, the end of the blade is turned up so that you will not cut the plants; the cost is sixty cents, and will be worth at least fifty cents a day for the use of it, as with it you can do that amount more of labor in weeding. One of these to the boy or girl who tends the garden, will be a nice present for the first of May.

The boys must have a barrel of common land plaster to put on the vines to keep off the stripped bug, and to give them a fine start; and when you send for plaster add a pair of pruning shears, you will find both at Hovey's whose card is in the FARMER.

In May the hogs go to the clover pastures, but these animals often abuse this luxury by rooting up the plants; Hurd's hog tamer will teach them better manners.

Here is another thing that is wanted in May: The children must have summer clothes, but without the use of a good sewing machine they cannot be made up before green peas, strawberries and cherries are ready to be picked, and the wife or daughter who does the sewing must look after these things, or they may not be on the table. To remedy this send for one of Grover & Baker's sewing machines, and the berries can be picked and the green peas flank the bacon for dinner. You will have no trouble to master the use of this machine; it is almost impossible to get it out of repair, for sew it will, even in the hands of the most unskillful. Such a present to the wife is but a fair offset for the sulky, rake, the cultivator or the

Burson, and as you are in honor bound to divide the new implements with the household, order it without delay.

The small grains, the trees and hardy plants have been sown or planted in April. You now finish up the corn, the beans, the cotton, tobacco sorgo, the late garden vegetables, potatoes, turnips and beets, but you lack a few bedding out plants for the front yard—just a few verbenas, geraniums,—well you may as well ask your wife or daughter what they want and order them at once.

Illinois for Fruits.

The State of Illinois forms the center around which cluster the great group of the Northwestern States. In consequence of her happy geographical position, of the wide scope of latitude within her grasp and the genial influence of the great air currents that kiss her rich, rolling surface, give her peculiar claims in a pomological view to pre-eminence over her sister States, that will enable her to supply early vegetables and the staple and choice fruits in advance of all others. She may well be called the garden of the Northwest, not only from her geographical position, but from the nature of her soil and climate, which embraces a wide range of temperature, ripening the fig in latitude thirty-seven, and yet perfecting the apple and the pear in the northern limits at forty-two.

The great current of heated air that comes from the tropics in summer passes to the west of her, scorching the plains of Missouri, Kansas and Iowa, while the center of the great waves of cold that come down from the north in winter returns over the same channel and touches her but lightly.

Although the climate is strictly con-

tinental, yet from the influence of the rivers within and on her borders and being out of the central current of heat and cold, is less subject to sudden changes than the States to the west.

ORCHARDING.

For a long time it was supposed that the prairies were not adapted to this branch of horticulture, but the culture and grazing of these vast meadows, by exposing them to the sun and air soon dispelled this fallacy, and now we find some of the largest and most profitable orchards in the State located on the rolling prairies, thus giving them a new value. From being wet even on the high land they have become dry and friable and well adapted to the growth of almost all plants of woody structure. The prairie orchards are or will be sheltered by artificial belts of timber which ward off the cold and high winds that would destroy the fruit at the time of inflorescence, as well as other stages of its growth, and in addition to this make a valuable and cheap fence. A respectable percentage of the whole State can thus be made available for orcharding or fruit growing of some kind, more especially the apple, the most valuable of all fruits; though central Illinois and the *loess* or bluff formations of the Mississippi are the most valuable for this purpose.

Geologically the State is divided into four natural or grand divisions, each of which require a different selection of varieties to succeed the best. While the Newtown Pippin is large, high-flavored and productive on the river bluffs and the mountain limestone formations, it is worthless on the black loams and *granite drifts* of the center and north part of the State.

The facilities of transportation afford

ed to all parts of the State, at all seasons of the year, to either the north or south, give to the orchardists of the State great advantages that cannot be overestimated.

While the climate of Ohio, Indiana and Michigan is yearly becoming less valuable for fruit growing on account of the clearing up of their forests, this State is becoming more valuable from the increased growth of timber belts, that tend to modify the climate, guard against sudden changes and gives to the country a more equable distribution of rain.

The prairie orchards, thus far have produced uniform good crops, and some of them now send to market two to six thousand bushels of apples annually. An increased attention has been given in this direction within the past three years, and the number of trees planted have been nearly doubled since the spring of 1863.

GRAPE GROWING.

The State must soon stand first in the list of grape growing States. This fruit can be grown to more or less advantage in all parts of the State, but the *loess* of the Mississippi stand out most pre-eminently in this respect. In Hancock Co. it is estimated that there are now 400,000 vines, while Madison and Adams counties are but little if any behind.—The planting at Warsaw is as follows :

In 1855 there was planted.....	20 vines.
In 1858 " " "	100 "
In 1859 " " "	650 "
In 1860 " " "	3,329 "
In 1861 " " "	3,135 "
In 1862 " " "	2,365 "
In 1863 " " "	65,000 "

In Nauvoo up to and including last spring, there was estimated to be 190,000 vines.

No branch of rural economy is receiving more attention than fruit cul-

ture, in the apple orchard, the vineyard and the small fruit gardens ; apparently only limited by the trees and plants within reach of the planters.

PEACH CULTURE.

The peach lands lie south of the 40th parallel and within the Mississippi and Wabash rivers. This section has no serious competitor. The peach crop of Michigan coming at the close of the crop from this part of our State. The banks of the Mississippi and the grand chain of hills in the south part of the State are remarkable for fine peaches, and it is on those formations that most of the peach orchards are located. These orchards now cover some thousands of acres.

SMALL FRUITS.

These are assuming no small importance, even if we do not include among them the grape. The strawberry is sent to market from the south part of the State May 10th, at the time they are in bloom at the north part of the State, and the first ripe peaches go north August 10th ; so the small fruits fill a void that the orchard cannot supply.

The strawberry is followed by the raspberry, and that by the blackberry, between which is sandwiched the currant and the gooseberry. The May cherry goes north with the strawberry and follows the season in its progress, thus extending the small fruit season over a wide area of summer. Illinois is the fruit and vegetable garden of the valley of the upper Mississippi.

Reapers and Mowers.

Until within a year or two manufacturers have persisted in making combined machines, but as soon as the farmers had an opportunity to test the

mower separately, the demand compelled the division. The difference in the two is so radical that it has astonished us that the change had not been made before. More than ten years ago we urged this change and persisted in its accomplishment, but manufacturers laughed at the idea. The argument was this: most farmers want a reaper, and are content to have one that will cut grass moderately well; they will not be at the expense of the two separately. But we urged that they can afford it, for a combined machine will cost more from the simple wear and tear of grass cutting.

In the cutting of grain a slow motion is only required, and as the sickle is long and consequently heavy; the strain on it and the wear at the wrist is comparatively light, but when the motion is doubled, as it must be in cutting grass, the machine cannot stand the strain on it; the wrist soon begins to wear, and in two years' use the machine is worn out and thrown aside.

We have three different reaping and combined mowers in use on our farm, all of which are good reapers, and for the first season the J. H. Manny did very good work as a grass cutter, but since then has been of no value for that purpose. The cutting of forty acres of grass wore it more than four hundred acres of grain would have done. As a grain cutter it is yet an excellent machine, and being so well adapted to the Bunson binder that we hope to use it several years to come.

The Wood mower (see advertisement) was generally used in this county last year, but from two defects did not give so complete satisfaction as its high reputation warranted. Some of the sickles were made of poor iron which was not

discovered until put in the field and found wanting. The crank was also defective, which caused the breaking of the sickles. These defects were not uniform and only attached to a few of the mowers. These are now remedied and but few other machines can be sold in the county. When we take into consideration that this county of Champaign is one of the great stock counties, not only sending to market annually thousands of head of fine cattle, sheep and swine, but ships thousands of tons of hay south, we may consider this a strong recommendation for the Wood machine. In many cases these mowers cut their hundreds of tons of Timothy hay and prairie grass during the season, and yet they have little appearance of being worn. The short, (four feet,) light sickle can be run at a high speed without jerking, and if kept well oiled will cost but little annually for a long series of years.

In most of the combined machines we must use four horses and of course will require an expert driver to manage them. It may be claimed that a six foot combined machine will cut more grass in a day than the four feet machine, but though the theory is correct yet the performance is at fault, and as a general thing the delays of the large machine more than compensate for the always ready little clipper that the farmer boy is proud to handle.— We can state the case in another form. If we could hire a machine by the day, we would pay more for the four feet single mower than for the six feet combined, even if an extra team was put with it at the same price. We do not know of a single combined machine having been sold last season in this county. The Woods self raking reaper b e-

coming very popular, and among this class of reapers stands deservedly high. We saw its working throughout the great reaper trial at Dixon, in competition with several others, and there could be but one opinion: that it was the most valuable for ease of draft, superior work, simplicity of structure and durability. The combination consists of detaching the reaping gearing from the main driving wheels and attaching the mower. Strictly speaking it is not a combined machine, for none but the driving wheels and seat are used in common; and as a mower or reaper essentially two machines; yet in this way the two are materially cheapened; that is, the self raking reaper costs \$155, to which is added \$30 for the mowing apparatus, making the two cost \$185, while the two separately would cost \$260, or a difference of \$75.

With a six foot reaper we can cut on an average twelve acres a day, or about two hundred acres during the harvest. With a four foot mower and two horses we cut about six acres of prairie grass, or eight of timothy and clover. The haying season for both of the above grasses lasts from early in June to the first of October, or over one hundred days. We know of one farmer who cut three hundred acres of timothy grass with one of Wood's mowers last season.

It is a matter of pride to the farmer that we now have so many machines for the harvest of such great excellence. They make the haying and harvesting comparatively easy, and it is no longer to be dreaded for its sorry days of weary toil in swinging the scythe and the cradle. The coming season is to test further improvements in this direction.

Poetry.

Latter-Day Warnings.

BY O. W. HOLMES.

When legislators keep the law,
When banks dispense with bolts and locks,
When berries, whortle—rasp—and straw—
Grow bigger *downwardn* through the box—

When he that selleth house or land
Shows leak in roof or flaw in right—
When haber-dashers choose the stand
Whose window hath the broadest light,—

When preachers tell us all they think
And party leaders all they mean,—
When what we pay for, that we drink,
From real grape and coffee-bean,—

When lawyers take what they would give,
And doctors give what they would take,—
When city fathers eat to live,
Save when they fast for conscience' sake,—

When one that hath a horse on sale
Shall bring his merits to the proof,
Without a lie for every nail
That holds the iron on the hoof,—

When in the usual place for rips
Our gloves are stitched with special care,
And guarded well with whalebone tips,
Where first umbrellas need repair,—

When Cuba's weeds have quite forgot
The power of suction to resist,
And claret-bottles harbor not
Such dimples as would hold your fist,—

When publishers no longer steal,
And pay for what they stole before,—
When the first locomotive's wheel
Rolls through the Hoosac tunnel bore,—

Till then let Cumming blaze away,
And Miller's saints blow up the globe;
But when you see that blessed day,
Then order your ascension robe!

Miscellaneous.

THE FRUIT PROSPECT.—Mr Orson Rogers, of Marengo, Ill., an old and experienced horticulturist, has just returned from Berrin county, Michigan, (across the lake from Chicago,) where he spent two days in the extensive fruit orchards of Judge Henry Fuller and Silas Sawyer, Esq., to ascertain the extent of the damage done by the frost and cold weather of the present winter. After a very careful, thorough and extended investigation, he came to the conclusion that the peach buds have been completely killed, and that there will be no peaches next summer; that the peach trees are but partially killed, and will be ready to bear next year; that the apple and pear trees are not seriously injured, and that we will probably have a full crop of apples and pears next summer.—*Bureau Co. Republican.*

Raising Calves on the Cow.

M. J. SMITH, of Northampton, Mass., furnishes the following statement to the Hampden Agricultural Society, of his way of raising calves:

"I give my mode of raising such calves as I exhibited at our fair, knowing full well that it is by gleanings a little here and a little there, by our thinking and reading farmers, from agricultural reports and farmers' clubs, that has caused the vast improvement in agriculture which we have witnessed within a few years, and raised the standard of the farmer's life and calling.—I have tried most all methods of raising calves. Formerly I raised them by hand, that is learn them to drink from the pail from one to three days old, feeding them on new milk, warm from the cow, from two to four weeks, then changing gradually to skim milk, that is set the milk for twelve hours, then skim, warm and feed a few days, scalding in some middlings or oatmeal, and so on until the cream is all taken from the milk. We have also tried the hay tea, as recommended in some agricultural reports, but without any success whatever, and must say that I never raised what a farmer would call a good calf on the hand system, and for a time I gave up raising calves from the fact that I could buy just such herb tea, skim milk calves, from six to eight months old, from \$3.50 to \$5, much less than I could raise them.

I have come to the conclusion that if a calf is worth raising at all, it is worth raising well. My method is to put two good calves on to one cow. If at the season of the year that stock is kept at the barn, the calves are kept in a stable by themselves, with a manger convenient for feeding; they are turned to the nurse twice in twenty-four hours, just long enough for them to take the milk clean, which is done in a very few minutes. They are then returned to the stable and fed with plenty of rowen hay, with roots of some kind finely cut which they soon learn to eat if placed in the manger. A light feed of shorts or oats is most excellent, and in the absence of roots is absolutely necessary.—In the summer season, with plenty of feed, I let the nurse and calves run together in pasture, and have no further trouble with them until they come up to the barn, when if they are of proper age, which is at least six months, and if older no harm, they may be shut entirely away from the nurse, and fed on the best hay, with a mess of roots, shorts, or oats, daily. In this way we never have any stunted calves. In this way there is no standing still or going back three months after weaning, and the calf at one year old is heavier and worth more money than the average of calves raised in the ordinary way are at two years old.

But, says the careful farmer, there are objections to your mode of raising calves; first, they contract a habit of sucking, which they never forget. Second, the great cost, keeping cows solely for raising calves, would not pay. Third, calves forced along, or bread and buttered up, as the saying is, the first year, are like house plants, and when they come to be exposed, or brought to hard fare, they will wilt. They cannot endure starving and banging, like those that are toughened in raising, and have less constitutional strength.

Now I can answer all the objections brought forward, to my own satisfaction at least. In regard to the first objection, I have never had any trouble at all. Shut them a part for some weeks and they

are weaned, and I never knew them to take to sucking again.

In the second I admit that it costs more to raise a calf well than it does to raise one poorly, but who can afford to raise a calf six months for four dollars? Yet we can usually buy them at that price. I think the difference in the cost is not so great as is generally estimated. When we take it into account the time it takes to feed and care for the calf raised by hand, the value of the milk for swine, etc.

In regard to the third or last objection, I deny that there is any unnatural forcing in my mode of raising. It is only returning to the first and only natural way of rearing young animals of any kind, and I do believe one quart of milk drawn from the cow by the calf, is worth two fed in any other way. The calf that is fed on nutritious food, and kept growing from the time it is dropped, so as to make a year's gain at two years old, over the common method of raising, is the animal that has got the constitution. The bone is formed, the muscle developed, the chest expanded, and you have a constitution grown on to that animal that will last for generations, whereas the feeble and dwarfed constitution will be found on the animal that has gone through all the stages of toughening in raising.

A Chapter on Dogs.

The prosperity of the canine race and the interests of sheep-growers are totally incompatible. From all parts of the country, we have from farmers the expression of a desire to engage in sheep-raising if they could be secure from the destructive raids of dogs.

The Government is sadly in want of money to liquidate our National debt, and the best suggestion we have seen is from the Ohio Wool growers' Association, that a revenue tax of \$1 per head be laid upon dogs, which would bring a large annual sum into the National Treasury.

The damage from dogs in Ohio alone during the past year, is ascertained to be \$100,000.

If the proposed tax would decapitate one-half the worthless curs, millions would be saved to the country.

In the State of Connecticut, such a dog tax has been levied for a number of years, and the proceeds are paid into the County Treasury and applied to the remuneration of owners of sheep killed by dogs. When the offence of sheep killing is fixed upon a dog, it is thenceforward the duty of the town selectmen to give that dog no peace until his worthless life is destroyed. But notwithstanding this wholesome law, the losses of sheep-growers are not always promptly reimbursed, owing to the negligence of the selectmen. We think that a national tax as proposed by the Ohio Wool Growers, would be a decided improvement, and may be imposed by Congress, with decided advantage, not only to our finances, but to the interests of sheep husbandry.

In the absence, however, of that protection which the law ought to provide, we advise the owners of sheep to have a "law unto themselves" and destroy without mercy every sheep-killing cur who crosses their premises. A combination on the part of sheep-growers, with the determined purpose of exterminating the whole thieving, wolfish pack of ill-bred, ill-mannered canines that infest the country, would soon effect a radical cure of this pest to

sheep husbandry. The great and growing interests of wool-producers must be no longer subject to the blood thirsty instincts of the canine butchers, whose worthless lives are not worth one single innocent gamboling lamb. What more pitiable sight than to see your fields covered with the slaughtered remains of your darling flocks, the victims of a nocturnal raid of murderous dogs. It is extraordinary that the patience of sheep-growers has so long permitted this evil to prevail.

Dogs have their uses, and there are many noble animals of this species whose lives need not be sacrificed. A dog of decent training and cultivated breed would scorn to be seen in company with these nondescript curs, to whose low instincts the evil of sheep-killing is referable. The pure blooded Newfoundland, the sagacious St. Bernard, the noble greyhound, and useful hunter's and the shepherd's dog may still enjoy the care and protection of their masters, without the prejudice to our flocks. But the men who foster and multiply those detestable breeds of dogs that pester the community, consume the "substance of the land," and inflict irreparable damage to the husbandman, ought to be so heavily taxed as to compel them to join in the extermination of their canine favorites. Then each man might enjoy his flocks without hesitation, his sheep be allowed to multiply upon a "thousand hills," and mutton and wool become staple productions of all sections of our country.—*Working Farmer*.

Care of Dairy Cows.

A writer comments as follows on one point of this subject: Dairy cows should receive their food at regular intervals; their milk should be drawn at stated hours, and by quiet gentle milkers; and they should be treated at all times with the greatest kindness. In short, every means in the power of dairy farmers should be used to insure their tranquility. Harsh treatment also exerts a very injurious action on the milk, rendering it less buttery and more liable to acidity. Respiration is a species of combustion. At every breath we inhale oxygen of the atmosphere, which unites with and consumes the fatty matter of the food. When cows are worried or driven too rapidly, they breathe more frequently, inhale more oxygen, and more of the buttery portion of their food is consumed, leaving less to be converted into milk.

It is well known to all experienced dairymen that their cows yield more on pleasant days, or when they have the run of warm well sheltered pasture, than on cold, bleak pastures.—*Working Farmer*.

Economy in Wealth

[From the Scientific American.]

There is nothing which goes so far towards placing young people beyond the reach of poverty as proper economy in the management of household affairs. It matters not whether a man furnishes little or much for his family, if there is a continued leakage in his kitchen or parlor; it runs away he knows not how, and the demon Waste cries "More!" like the horse-leach's daughter, until he that provided has no more to give. It is the husband's duty to bring into the house; and it is the duty of the wife to see that nothing goes wrongfully

out of it. A man gets a wife to look after his affairs, and to assist him in his journey through life; to educate and prepare their children for a proper station in life, and not to dissipate his property. The husband's interest should be the wife's care, and her greatest ambition to carry her no further than his welfare and happiness, together with that of her children. This should be her sole aim, and the theatre of her exploits in the bosom of her family, where she may do as much toward making a fortune as he can in the counting room or the work shop. It is not the money earned that makes a man wealthy, it is what he saves from his earnings.—Self gratification in dress, or indulgence in appetite, or more company than his purse can well entertain, are equally pernicious.

Surface Manuring.

The following article on surface manuring, by Mr. Bright, of Philadelphia, we copy from the *Gardener's Monthly*:

It will be found especially valuable and those who have been in the habit of plowing in manure will do well to make a change. We have adopted the practice of surface manuring for some years, with satisfactory results.

The agricultural circles are very much exercised at the present moment with the question, whether it is better to apply manure in a partially rotted state upon the surface of the earth, weeks or months before they are required for crops, or to decompose them in heaps, and plow them in as soon as applied, at planting time.

The best writers, both practical and theoretical, in England and America, seem to incline to the first-mentioned practice, in reference particularly to grass and grain; and the best effects are shown to have resulted from this method of the application of surface manure.

The practice of top-dressing, or of surface manuring, has long been the favorite method employed by all intelligent gardeners within the circle of my acquaintance. We have long ago learned that masses of rich, nitrogenous manures are applied more successful (and less injuriously) by top-dressing, either in solid or liquid form.

Nature never manures her plants with crude masses of concentrated fertilizing substances; but imparts her stimulating and mineral food in a state of the most minute division (almost infinitesimal,) chiefly from the surface of the earth. No wonder so many fruit trees have been killed, so many fruit trees rendered barren by excess of wood, in consequence of the too heavy manuring at their roots so universally recommended by writers on gardening and Horticulture.

The great objection to surface manuring is founded upon the probable loss of ammonia, caused by exposure of decaying manures upon the surface of the earth. But this loss has been shown, by sound reasoning and by facts deduced from practical experience, to be much less than commonly apprehended, while the benefits arising from surface manuring, in other respects, more than counterbalance any possible loss of ammonia from this practice.

In the first place, when manures are exposed

upon the surface of the earth, even in hot weather, decomposition no longer goes on so rapidly as when the same manures are kept in a heap, and the ammonia that is produced is gradually carried into the soil by rains. The other soluble substance, as potash, lime, the phosphates, etc., are, of course not lost, because they are not volatile.

Nor are these soluble and valuable substances lost to plants by being carried into the soil before they are needed by growing plants. It has been conclusively shown by eminent scientific authorities that any good soil, containing a fair proportion of clay and carbon is capable of taking up and effectually absorbing ammonia, lime, potash, soda, etc., in a soluble form, so that little, if any, passes off in the underdrainage water of such soils. These substances, it is true, may wash from the surface, but they cannot pass through a good soil and go off into the drainage water.

By surface manuring we mulch the ground and render it cooler in summer and warmer in winter. Mere shade is an important element in culture, so important that many writers have thought shade alone to be equivalent to manure. A piece of soil heavily shaded by surface manuring actually decomposes like a manure heap; that is it undergoes a sort of putrefaction or chemical change, which sets free its chemical constituents, unlocks, as it were, its locked up manurial treasures, and fits its natural elements to become the food of plants. Darkeness, moisture and air are the conditions required for vegetable and mineral decomposition. These conditions are produced in the soil by surface manuring.

Then, again, when the surface manure decomposes, its elements are washed into the soil, in a state of solution precisely fitted to meet the wants of plants, and they become themselves active agents in promoting further decomposition and chemicals changes in the entire body of the soil.

Manure, then, I say, chiefly upon the surface. Do not waste your manures by mixing them deeply with the soil. Plant shallow. Keep roots of all trees, plants, and vines, as near the surface as possible. There are weighty reasons for the position assumed in the last sentence, which I have not space now to enumerate. I say again plant shallow. Let your soil be deep and dry, but plant near the surface. To farmers I would say, manure upon the surface as much as possible. Top-dress your grass, after mowing in July or August, under a burning summer sun; top-dress in the fall, before and during the autumn rains; manure the surface while the snow is on the ground, while the March winds blow, and while the April rains fall. Manure your grass, instead of your corn and wheat, broadcast, at any time when you have manure and leisure, and I will guarantee that you will be abundantly satisfied with the result.

To fruit-growers I would say, do not fill your soil with manure before you plant trees, grape vines, etc. Plant in good natural soil, and manure from the surface, spring and fall, liberally and properly, and I will guarantee you success far greater than if you plant in holes and trenches filled with manure, as the custom is. Surface manuring and mulching are the true doctrines. I am sure of it.

Cane Juice Evaporators.

In our last No. we offered some remarks upon cane mills, referring to a few general principles of universal application, which are always to be considered in connection with the subject. We now propose in the same manner to treat of evaporators and evaporation. But we are met at the very threshold of the subject with a difficulty. We shall not be able probably to name a single general principle that is not a controverted point. Milling cane is a purely mechanical operation, and cane mill may be estimated by fixed and acknowledged mechanical standards, but evaporating juice is quite a different thing, and there may be and are almost as many notions and theories about it as there are operators engaged in the business. We may perhaps timidly remark that rapid boiling with a shallow stratum of juice, is generally accepted in preference to slow, prolonged boiling, with a heavy volume; but this is the only general proposition we would venture to make with any hope of its being even complacently entertained. We must, however, write something upon the subject, be the consequences what they may. It is impossible to tell what particular sect of evaporator men we shall most offend, and as they are all about alike voluble belligerent, we do not know that we have any choice as to which shall take it upon himself to return and overwhelm us.

EVAPORATING BY STEAM.

Water in its natural state, is a crystalline solid. When combined, as the ancient philosophers termed it, with a certain quantity of caloric, it becomes fluid. When combined with a certain additional quantity of caloric it becomes gaseous. The quantity of caloric necessary to produce these changes is always and under all circumstances the same. The temperature of ice is 32° ; by the addition of as much heat as would raise an equal weight of to 174° , that is, by the addition of 142° of heat, the ice becomes converted to water; but the sensible temperature of the latter remains the same as the ice, 32° , all the heat absorbed being rendered *Latent*. If heat be now applied to water from a continuous and regular source, its temperature will be gradually raised to 212° , or the boiling point of water under atmospheric pressure. At this stage the temperature of the water ceases to rise, and steam appears; but the sensible temperature of the steam will be found to be the same as the boiling water, 212° . If the time which was occupied in raising the temperature of the water from the freezing point, 32° , to the boiling point, 212° , that is, in communicating 180° of heat to the water, be carefully noted, and the same uniform application of heat be continued, it will be found that at the end of exactly five and a half measures of the time the water will have entirely disappeared in the form of the steam; the steam, however, as above stated, is of the same sensible temperature as the boiling water, 212° , all the heat communicated, say 180 mul. by $5\frac{1}{2}$ — 990° , having been rendered, as in the case of the melted ice, *latent*. By this we see that it requires as much heat to convert a given weight of ice to water without raising its temperature as is required to raise the same weight of water from the freezing point, 32° to 174° , that is, 142° ; also, that it requires five and a half times as much heat to convert a given

weight of boiling water to steam without raising its sensible temperature, as is required to raise the same weight of water from the freezing point to the boiling point, that is, 990° , or, in round numbers, as usually stated, 1000° .

Without standing committed to any of the theories upon the nature of heat, let it be *abstract motion*, or an intangible essence, *ectetic* or *eclectic*, as may be determined by those who think themselves competent to decide, for our purposes it is allowable and very convenient to regard it as a substance-matter, and to consider an atom of heat to be as indistructible as an atom of granite. We have found that the steam of a given quantity of water takes up as much heat as would raise the temperature of five and a half times the weight of water from the freezing point to the boiling point; and now, as heat is indistructible, we are prepared to understand that if this steam be condensed or returned again to water, it must give out precisely the amount of heat it had previously absorbed, and it is obvious that if properly applied the heat thus given out in the process of condensation may be employed in heating or in boiling and evaporating other water always remembering that absolute and unvarying equivalents are required in every case. That is, a pound of steam will, upon being condensed, give out heat enough to raise the temperature of five and a half pounds of water from the freezing point to the boiling point, or to convert another pound of boiling water entirely to steam. It can never do any more, and never less. The only place for management and economy in the operation is in the means of utilizing the initial heat, preventing waste by radiation, and in properly applying the heat set free by condensation.

These data require to be observed and kept in view, as they will by and by assist in determining the oft repeated question as to the relative economy of steam and direct fire evaporation.

But in employing the heat of steam for evaporating it is common to generate in the steam boiler under something more than atmospheric pressure; say under a pressure of from one to six or eight atmospheres. By this means a great quantity of heat is contained in the same compass or volume, although in the same weight of steam the amount of heat remains the same. For example: a cubic inch of water converted to steam under atmospheric pressure, will expand to 1696 inches. If this be subjected to a pressure of 14.6 pounds to the square inch it will be compressed to 848 inches, and its sensible temperature will be elevated from 212° to 251° , resulting from a transfer of a portion of heat from a latent to sensible state. The sum or absolute quantity of heat remains the same it will melt no more ice and communicate no more heat to a certain volume of cold water than before it was compressed and its heat apparently increased. If it be further compressed by the weight of another atmosphere its volume will be reduced to 565 inches, and its sensible or apparent heat raised to 272° , another atmosphere will reduce the volume to 424 inches, and raise the sensible temperature to 294° , and so on, the volume of steam diminishing and the apparent temperature increasing at each stage, but the absolute amount of heat remaining the same. We thus have this apparent paradox, that a pound of steam, under a pressure of fifty atmospheres, and having a temperature of

more than 500° Fahrenheit, has taken up and contains no more heat and will melt no more ice than the same weight of steam generated and applied at atmospheric pressure corresponding with 212° . This fact is interesting, and at the same time important, in a practical point of view, as we shall hereafter show.

From the foregoing it will appear that the steam generated in a regular steam boiler with a certain amount of fuel, if applied in the ordinary way to the evaporation of cane juice, will, upon being condensed, give out as much heat and evaporate precisely the same amount of water as would be vaporized by the same quantity of fuel applied directly to the juice pan. It is moreover to be mentioned that the water of condensation which leaves the steam pipe in the operation is the exact measure of the water expelled in the form of vapor from the surface of the pan. There are, however, a few circumstances of minor importance to be considered. On the one hand, a regular steam boiler, having a large heating surface, may be supposed to absorb more of the heat of combustion than is utilized by juice pans, as ordinarily arranged. This is an advantage or saving effected by the steam process. On the other hand, allowance must be made for the loss of heat by radiation from a large boiler surface, and from the steam pipes leading from boiler to pan; also for the heat expended in raising the water in the boiler, and all the feed water, from what may have been the temperature of the former at each time of starting, and of the latter when pumped into the boiler, to the boiling point; for it must be remembered that effective results are not produced until the temperature of the generating apparatus is raised to boiling temperature. These constitute a drawback or a deduction to be made from the steam process. On the whole it may be safely assumed that the gain and loss growing out of these minor circumstances are about equalized, and that, practically as well as theoretically, there is no economy in either plan over the other. Each may be more economical than the other accordingly as the absolute conditions upon which economy depends are more perfectly complied with.—*Clark's Sargo Journal*.

We give place to the above carefully prepared article, for the purpose of enabling our readers to make their calculation in regard to the size of their pans and mills as compared to their crops.

A large breadth of cane will be planted in Spring and farmers need make preparation to have it marked up, when this can be done on shares, in some cases this will not be the case and you will be obliged to put up your own fixtures. Ed.

WHITE BEANS.—This crop ought to be more generally cultivated by farmers. The small variety or army bean, is in great demand for our troops, and is worth at least \$2.50 per bushel at wholesale. They should be sown in drills about $2\frac{1}{2}$ feet apart, at the rate of at least a bushel to an acre. Sow from the 10th. to the 25th. May. Fifty bushels to the acre are known to have been raised. They are a safe crop to grow between the rows in a young apple orchard, and always leave the ground in fine condition. Let every farmer resolve to have at least one acre this season.—*Working Farmer*.

Hardiness of the Delaware Grape.

EDS. PRAIRIE FARMER:—My attention has been called to an article in your paper of the 5th ult., from Dr. Shroeder, in which he classes the Delaware as a tender grape—saying that many varieties which he names, are dead, “and the blessed Delawares among the rest.”

Now I want to have a little plain talk with you about grape vines in general, and this “blessed Delaware” in particular. The charge which our genial friend, and a few others in the northwest bring against the Delaware is certainly a slander, and I cannot permit it to pass without correction. Mind, I do not accuse our friend of wilful misrepresentation. I esteem him to be entirely above such vulgarity—but I believe his mistaken judgment of the Delaware to be the result of error or fraud on the part of those “rascally nurserymen” who sold him the vines. I cannot believe, from what he says,—for I have not seen for myself,—that he has a true Delaware on his grounds, unless it may be some miserable culls, propagated from “water shoots,” or weak, barren wood, and obtained from that synonym of rascality, a tree peddler, and which have never borne and probably never will. This state of facts too often met with in the Northwest, the region especially cursed with tree peddlers, is enough to account for nine-tenths of the cases of “tender Delawares.” But I am inclined to the opinion that the true solution of this case is to be looked for in another direction. It is probable that the doctor has got the old Red Traminer—a tender, foreign variety much resembling the Delaware, mixed up with his “hundred and sixty sorts of grapes,” under the name of Delaware. If I am right, then he must indeed “take it to bed with him,” as Rosensteil says, if he would have it live in *our* winters.

And now for a few facts in regard to this “blessed Delaware.” Everybody, I believe, whose opinion is worth having, concedes that the Delaware is head and shoulders above all other natives *in its fruit*, both for wine and table uses, and I now propose only to add the weight of my testimony to the mass of evidence already before the public, in regard to its hardiness, vigor and productiveness.

Last fall I exhibited at the State Horticultural Fair at Rockford, a fair sample of several hundred two year old Delawares in my grounds at Kenwood. These vines were propagated by myself, from buds or single eyes, from old established vines. The eyes were put into the sand in March, 1861, and the plants turned out into the border in June and July following, without disturbing the roots. The following season they made thrifty, handsome canes, which last fall, two years from planting, or *exactly eighteen months* from the buds, ripened an average of thirty good bunches to the vine, besides making canes for this season's work, averaging fifteen feet in length and at least three-eighths of an inch in diameter.

Now I would most respectfully ask, what more can Dr. Shroeder or anybody else want in the way of thrift and productiveness?

And now, one fact more as to the hardiness of these vines. Last fall, from lack of help, only my bearing vines were protected, while several thousand young Delawares in the nursery were left exposed through the last terrible winter. They have endured a temperature of *thirty degrees below zero*,

and there they are for the Doctor or anybody else to examine. I will assure him, however, that they are alive and can speak for themselves.

DR. J. ASA KENNICOTT

Chicago, Ill., April 1864.

The above we cut from the *Prairie Farmer* for the purpose of giving both parties an opportunity of being heard, for we intend to have not only something to say but something to do with the Delaware. We have before said that the Delaware is a valuable grape in certain locations, and the lake shore at Kenwood is probably one of them.

As to Dr. Shroeder, he can take care of himself in this matter, and knows the Delaware from the Traminer.

We have some thousand plants in pots grown from single eyes in the green house, as stated by Dr. K., and shall follow his formula, and if they do well shall be happy to make a note of it. All this bosh about over propagating must have its day. That the grape needs the best of care, and will not thrive under other conditions, is the trouble.—ED.

WINES.—Sam Patch said that “some things could be done as well as others.” And why not? There is a man residing in New-Jersey who is making thousands out of the sale of elderberry wine, under the name of SAMBUCCI WINE. He purchases large quantities of elderberry (*Sambucus nigra*) in their season, and make a very palatable wine, which is pronounced by many as delicious, under the name of Sambucci, but would be voted abominable as plain common elderberry. Now I intend making a large quantity of good old-fashioned farmer's currant wine this season from one of the best receipts published in the Co. GENT., and advertise it extensively as RIBES RUBRUM WINE. I shall take good care to present clergymen, physicians, and others, in different localities, with a bottle to each, to secure their good opinion. I find I am too late to try rhubarb, as that is about to be made so public under the name of Wine Plant, and then the botanical name (*Rheum*) is so suggestive of salt-rheum and rheumatism that it wouldn't *go down* with the public. Look out for sparkling Ribes wine.—*Cor. Country Gent.*

RURAL N YORKER.—While passing through Rochester, recently, we dropped in on our friend, Chas. D. Bragdon, at the sanctum of the *Rural New Yorker*. Busy as ever with pen and scissors, he still found time to entertain an old Illinois friend. Mr. B. is a Western man and thoroughly western in all his ways and notions, and we believe would prefer a residence in Chicago as Western Aid to the Col.; But he is needed in the office, because much of the time of Col. D. D. T. More is required with the publishing of the “Practical Shepherd,” now, we believe, already in its fifteenth edition. The Shepherd is having a big run.—We believe it is a valuable book; have not yet had time to examine it, but shall do so as soon as an opportunity offers.—*Rockford Register.*

The Lake Tunnel

Last Thursday the formalities of breaking ground for the great lake tunnel took place, under the auspices of Mayor Sherman, the Board of Public Works, several members of the Common Council, and other city officers. A large number of spectators were present to witness the ceremonies. The first shovel-full of earth was dug up by Mayor Sherman and "hove-in" to a wheel-barrow—the performance being signalized by the discharge of cannon. Contractors Gowan & Dull are prepared to commence operations with an immense force, and the work will continue night and day, without interruption, till finished. The tunnel will be two miles in length, extending out into the lake—from the present water-works—to a point where the water is clear as crystal.

The work is to be finished by November 1865. Thus in a little more than *a year and a half*—if this scheme proves successful Chicago will be supplied with an abundance of pure water. Prospectively this seems like a long time for us to "worry down" the filthy compound now furnished by the city water-works. But "there's a good time coming," if it is a long way off.—*Chi. R. R. Gazett.*

A grand scheme and all very nice on paper; if it but proves successful, that's the rub. Two miles under the bottom of the Lake depending on the integrity of the clay.—well we will see what we see—a grand fizzle in the way of pure water by this scheme, that has been *hove-in*, to deplete the pockets of the people.

Should the fool killer visit Chicago pine coffins would be in demand by the City Fathers.—ED.

HINTS TO FARMERS.—A good farmer will never keep more than ten dogs to five sheep.

He will clean out his stables at least once a month.

He will keep five or six sticks of wood cut up ahead, more than what is necessary for immediate use.

He will not go to town and get on a spree oftener than three times a week, at least in harvest time.

He will be very careful not to put up a rail on a line fence unless his neighbor is there to help him.

He will not injure his health by lying in bed after eight o'clock A. M., but will have his cows milked and breakfast over and his men at work as early as ten o'clock.—*Selected*

☞ There are two kinds of girls. One is the kind that appears best abroad—the girls that are good for parties, rides, visits, balls, etc., and whose chief delight is in such things. The other is that kind that appears best at home—the girls that are useful and cheerful in the dining room and all the precincts of home.

☞ More than 70,000 trees, shrubs and herbaceous plants were planted in the New York Central Park last year. The Carriage drive now completed is about eight miles in length; bridle road five miles; and walks 20 miles. Over 4,000,000 persons visited the Park in 1863, and in one day over 9,000 carriages entered the drives.

Editor's Table.

BAKER & PHILLIPS - - - PUBLISHERS.

M. L. DUNLAP, Editor.

SPRINGFIELD, ILLINOIS, MAY, 1864.

We could write a volume on May, but it is useless now,—to read of May when May is in her glory, would be like kissing the picture of a loved one when that one was present. Rather revel in the sunshine of May and see how she is robing forest, field and garden in beauty, wherewith to greet the coming summer. No month was ever gemmed with such gorgeous splendor, such wreaths of flowers, such festoons of vines and such rich carpets as May presents to the eye of the farmer. The orchards are sheeted with beauty, under which lurks the promise of luscious fruit, to tessellate the sun-browned way of summer, and to give gladness when autumn dissolves the fields for winter.

How we sympathize with our cotemporaries, who, cooped up in city sanctums, are compelled to listen to the rattling of carts and wagons, as they hurry to and fro through the busy streets, while we of the country have the music of the birds that have just returned with new songs, learned amid the orange groves of the south.

"They have no sorrow in their song
No winter in their year."

It is well that they are used to it, poor fellows! Let them write of May, and solace themselves with its beauties—at a distance.

WINTER WHEAT.—From all that we can learn the winter wheat is somewhat injured by frosts, or what is called winter killing. We sowed a sample, sent us by Com. Newton December 8th, and a half bushel of rye at the same time. Both look promising, although they did not germinate until early this spring.

SUGAR FROM BEETS.—It appears that the Messrs. Gennert Bro., at Chatsworth, have been disappointed in getting their machinery in working order for the last year's crop of beets, but we learn through the *Prairie Farmer* that their faith in the ultimate success of the enterprise is in no way abated, but rather confirmed, and that the planting will be more extended this year. We had intended to visit them before this, but have been waiting for them to get in working order. We must be patient, enterprises of this kind are not mastered in a day; and though it should prove as successful as its most sanguine friends predict, it

will be some years before beet root sugar mills will send up their tall chimneys in all our villages. After ten years sorgo is beginning to assume commercial proportions.

CHICAGO BANK NOTE LIST.—How often is it that the farmer is made the victim of *wild cat* and counterfeit money, and how little he prepares himself to guard against these impositions. He seldom thinks that a dollar paid for a monthly note list will prove a good investment; he can pay to insure his buildings against fire, but he does not pay to insure against these swindling operations. This is bad economy and we recommend a change. This bogus stuff is generally traded off for cattle, horses and farm produce, and is left worthless in the hands of the farmers. It is impossible to keep posted in all the variety of trash called money, without such a list. Try it, for once.

In the last No. we notice a large number of rag money mills quoted one-fourth to five per cent discount. Breakers are ahead and we advise our readers to stand from under. You can safely keep the greenback, national currency and that of our solvent Illinois banks, but get rid of the other trash.

SEEDS FROM THE COM. OF AGRICULTURE.—We are in receipt of a large package of seeds from the above source. They have the appearance of being good, fresh seeds that will grow. We shall plant them and report the result. We had become disgusted with most of the trash sent out from the Patent Office, and are pleased to see a radical change in the quality and variety of seeds that Com. Newton is now sending to the country.

CULTURE OF THE CURRANT.—This fruit needs generous treatment, thorough culture and plenty of well rotted manure. No weeds or grass must be allowed to interfere with them. If shaded in the afternoon, so much the better, but give them the morning sun if possible, and we will guarantee you large berries.

CLOTHES' WRINGERS.—A little over two years since we purchased one of the first clothes' wringers brought into this State. The frame was of galvanized iron. A few weeks since the lower roll gave out and we sent to the shop in Cleveland, (Putnam Manufacturing Company,) and received a new roll, which makes the machine as good as new.

We have several letters of inquiry in regard to the place where these iron frame wringers can be had in the State. One lady says that her wooden

frame is so difficult to adjust and fasten on to the tub that she must have one of the iron frames.—We suppose they are for sale in Springfield, but as we have not been there for near half a year we cannot tell who keeps them. The number of these machines sold is astonishing. There are three varieties of them, two of wood and one of iron frames, the rollers being the same in all. Of the iron frame, sixty thousand have been sold within the past two years and yet only a small per cent. of the whole number of farmers' families have them. In the cities and villages they are quite common; but the farmer's wife, who is most in need of one, must wait a little longer. Has she no right to the labor-saving implements of the household? Here are the points;

1st. It is a relief to the hardest part of washing day.

2d. It enables the washing to be done in one-third less time.

3d. It saves its cost by saving the clothes.

4th. It helps to *wash* the clothes, as well as *dry* them.

5th. The rolls being of vulcanized rubber, will bear hot and cold water, and will neither break nor tear off buttons.

OSAGE ORANGE SEED.—C. R. Overman, at Bloomington, writes us under date of March 21st:

"Capt. Mann has just returned from the frontier army, having arrived to-day. Reports they were 500 miles beyond the region where the orange is grown, and that there is not the slightest chance to obtain seed. Some 400 pounds have been sold at St. Louis of late, at \$2 50 per pound, (\$87 50 per bushel.)"

Thus it will be seen the prospect of osage seed is not of the best. Capt. Mann had a permit from the War Department to gather seed if an opportunity occurred. As the Capt. has been on several trips for seed in Texas, he was just the man to get it, but alas, we must wait over the border another season.

THE GRAPE CULTURIST.—We are in receipt of this work, but have had no time to give it a careful reading. We therefore copy what the *American Agriculturist* says of it, and will give our views in full next month:

THE GRAPE CULTURIST, by A. S. Fuller, the well known practical horticulturist. This long promised work is at length issued. It forms a neat volume of over 200 pages, and is amply illustrated with upward of a hundred engravings. This treatise covers the whole ground of garden and vineyard culture, from starting the plants from eyes or cuttings, to the established fruiting vine. The whole

is told in a plain style and from the author's own experience; his system of pruning is very simple and easily understood, and the reasons are given for preferring it to others; he however gives the other modes in practice, and illustrates the whole in the most liberal manner. The descriptions of varieties are brief and pointed, and the list of valuable sorts is properly made very brief. The volume contains a list of all the works upon the grape heretofore published in this country. This most useful manual will be equally valuable to the one who cultivates a single vine, and to the vineyardist. We can send it post paid by mail, on receipt of price, \$1 25.

A BROAD HINT.—We are usually amused in reading the discussions of our horticultural societies. Most of the Solons there assembled, would befog the most clear-sighted and reliant. Each has a hobby; or rather, has found the only variety, or plan of treatment, which shall bring success. There are generally as many opinions as persons, and he who tries to walk in the different ways marked out will find himself in the fix of the man and the ass in the fable.

Many of these amateurs are experienced in their profession, but many more are no better posted than thousands who make no pretensions. In our *Farmer* we now and then read the *dictum* of a nurseryman for or against certain varieties of apple or pear, uttered with an air which forbids appeal, when at the same time we *know* to the contrary. He was probably right, we are right, soil or cultivation accounting for the difference. But when men gravely tell us that clean, thorough cultivation, generous feeding, etc., are essentials, we feel overwhelmed with gratitude. We should feel equally as grateful were they to elaborately declaim upon the benefits of good cultivation for corn.—This ever recurring "hash" of common-place truths is tedious. Give us items of progress; new developments in agricultural science.—*Wis. Chief.*

Will not some of our fruit men take this hint and give us something new?

CULTURE OF ONIONS.—**A HINT TO FARMERS.**—The extraordinary rise in the price of onions, caused by the great demand in our camps and army hospitals for this most valuable of all common vegetable anti-scorbutics, has doubtless sufficiently indicated to intelligent farmers, that the onion crop will be one of the most profitable which they can cultivate this season. In order to assist them in this promising work, we copy the following hint from the communication of a farmer to a western paper.

The prevailing opinion is that to grow good onions the sets grown the previous year should be planted. This is an error. Better onions and larger crops can be grown from seed than from sets. The seed should be first sown in a hot bed as thick as they can stand. As soon as the seed is up, open the beds to the air and water freely. In April prepare your ground and plant the sets from the hot bed, singly, one by one, three inches asunder, in rows ten inches apart. If the ground is very good and they are well cultivated, you may have eight hundred bushels from an acre.—*ED.*

The above came to us without credit, shall give it a trial. It certainly looks plausible.—*ED.*

Flour and Grain in Store in Chicago.

The following is the amount of flour and grain in store in this city on Saturday, March 19, 1864, and as compares with the corresponding period of last year:

	March 19, 1864.	March 17. 1863.
Flour, brls.....	93,019	148,000
Wheat, bu.....	2,092,884	1,425,255
Corn, bu.....	845,577	2,492,068
Oats, bu.....	2,042,015	1,048,637
Rye, bu.....	60,306	135,176
Barley, bu.....	143,147	15,629
Total.....	5,672,294	5,850,965

It will be seen by the above that the amount in store does not vary materially from last year.—Corn shows a serious falling off, but wheat and oats fully make up the deficiency.

The total amount of grain and flour received in Chicago from all sources, except that by teams, for four years, is as follows:

Total, 1860.....	35,040,776
Total, 1861.....	53,942,426
Total, 1862.....	56,894,203
Total, 1863.....	52,892,159

The smallest amount received any one week was 131,993 bushels for the 9th week of the year 1860, and the largest amount was 2,577,262 bushels the 24th week of 1862.

The Illinois Central railroad brought up to Chicago for the week ending March 12th:

	1863.	1864.
Flour, bls.....	1,107	2,091
Wheat,.....	9,050	7,000
Corn,.....	43,050	11,450
Oats,.....	5,200	1,650
	57,300	20,100
Reduce flour to wheat,.....	5,535	10,455
	62,835	30,555
	30,555	

Deficit.....32,180.

This shows an important falling off, and that, too, without any hope of improvement. A part of this falling off is more apparent than real, as a large amount of the grain along the line of the road finds a market south, probably much more than last year.

In live stock the difference is also large:

	1863.	1864.
Cattle,.....	4,268	2,040
Hogs,.....	81,924	25,677

The emigration now coming in, absorbs no small amount of our surplus. This is more particularly the case along this line of road, which is selling a large amount of new farming lands to be at once put under the plow.



The Craig Microscope.

The Microscope simplified, and adapted to popular as well as scientific use. A new optical wonder! Patented Feb. 18, 1862. This is the only instrument of high power which requires no local adjustment, and therefore can be readily used by every one, even by children.—

Costing only Two Dollars in brass, or Two Dollars and Fifty Cents in hard rubber, it is within the reach of all in the community, and should be on the table of every family.

This beautiful and ornamental instrument renders the blood, pus and milk globules, and cancer cells, as well as the animalculæ of stagnant water, distinctly visible; shows the tubular structure of the hair; the circulation of the blood in the web of a frog's foot; and opens up the minutæ of creation to the view of the astonished beholder, "where the unassisted sight no beauty sees." It furnishes an endless source of home amusement and instruction to every one, especially to the young.

As a *Gift* or Present to a friend or child, it is unsurpassed, being elegant, instructive, amusing and cheap.

There is no other Lens made like this. It magnifies about 100 diameters or 10,000 times, and, owing to its simplicity, it is invaluable for physicians, scientific men, students and schools; and for every one who is a lover of the beautiful things of nature; for it opens up an unseen kingdom to the view of the inquiring mind. It is amusing, instructive and useful.

Each Microscope is put up in a neat box, with full directions for using it carefully pasted on the box.

☞ All proper objects can be used without their being mounted, simply by placing them on the glass side, or, if liquids, on the under surface of the lens, but as mounted objects are very convenient and always ready for use, and as inquiries have frequently been made for them, the proprietor is having several dozen from among the most interesting and beautiful objects neatly mounted and boxed, and is now prepared to fill all orders at a very low figure, as will be seen on the last page,—only \$1 50 a dozen, or half the usual price charged by opticians for mounted objects.

Microscopes of any value have hitherto cost too much to be in common use, but this objection is now removed. Children must have something to interest them, and that something might just as well be a useful object as one of no value. While the microscope pleases, it cannot at the same time fail to instruct.

The almost endless variety of objects within the reach of the child, and which he can soon learn to arrange for the instrument, will prevent his becoming weary of it. Every class of persons, without regard to age, are interested with it, from the fact that it opens up a new field of vegetable and animal life, that was beyond the reach of the naked eye,—a new creation beyond that which was before perceptible to him. To the gardener, the or-

chardist and the farmer it is useful as well as instructive. The line between animal and vegetable life is marked by its use.

The novelty magnifying glass is also a valuable, and we might say an indispensable accompaniment, more especially to the botanist and entomologist, as by it large bugs and other insects can be examined, while only small portions of them can be placed in the Craig microscope. The cost of it is \$1 50 when sent by mail, and \$2 25 for the microscope. To a lad or miss of any age over six or eight years, the two would make a valuable present, and prove more valuable than the ordinary toys.

The magnifying glass can be used in the field by placing it on a leaf, the bark of a tree, or any such object, while small insects can be enclosed in it alive, and can be examined in that condition.—With the microscope we can see the wiggling eels in a small drop of vinegar, or the nondescript animalculæ in river water.

Above we give a cut of the Craig microscope. These useful instruments can be had in most of our cities, or of Henry Craig, 180 Center St., New York, by mail.

Can there good come out of Egypt?—The Red Cedar

Yes, we think so. There are millions of young plants of the Red Cedar along the Grand Chain, or as it should be called, the Ozark Range, being an extension of that well known range of hills. What we want is for some enterprising parties to send these plants to the northern prairies, to be planted in timber belts and groupings. The wood will be valuable for fence posts, but more so for vineyard stakes for the millions of grape vines that at no future day will grace the prairie gardens and village plats.

The Cork Bark or Winged Elm is a desirable shade tree, which grows abundantly in the same location. But little has been done as yet to send out these cedar plants, though the time is not distant when it must and will be done.

For several years we have made it a rule to obtain annually five thousand plants of these seedlings, and now we have a respectable plantation. We have no more trouble in their living than with so many hard wood tree plants of the same age. A few other parties have also ordered from the same stock of plants. No native Egyptian has even thought it worth his while to see if money could be made out of this native product. We claim to be the first person who called the public attention to these trees, and for an experiment re-

quested G. H. Baker, of Cobden, to send us a hundred trees one to two feet high. These came and all grew well; that was some years ago, since then Mr. J. A. Carpenter has sent us thousands of plants. These have been from four to eight inches high, and have cost three to five dollars a thousand.—The first lot came in the spring of 1859 and were bedded in under the shade of some large peach trees, and the following spring replanted in the nursery; those of 1860 were treated in the same manner. Those of 1862 will go out in nursery rows and timber belts this spring. Those of 1863 were put out in the open ground in nursery rows, and, notwithstanding the severe drouth, are more than half alive; hereafter we shall put them at once in the open ground.

In taking up Mr. Carpenter puddles them and encloses the roots in a ball of clay, which is found to be the best mode. When ready to set these lumps of clayed roots are soaked to dissolve the clay, when they are ready to set out.

We believe this would be a safe way to send out all young evergreens, and here suggest to Mr. Douglas that he try the experiment on some of his seedlings, side by side with the moss. As the season is so much in advance of other parts of the State where the cedars are grown, they can be sent out in time to set them very early, which is important. If we could have a set of men as industrious as the willow peddlers to distribute these seedlings over the State, it would be a great boon, but we must have such careful men as Mr. Carpenter to take them up and pack them for shipment, or few of them will grow. The roots of the cedar, like all evergreens, must not be exposed to the sun or wind.

The Storage Question.

We understand that the Legislature of Wisconsin, at its late session, passed a bill requiring railroads terminating in Milwaukee, to deliver grain to the warehouse to which the shippers may consign it. Heretofore they could deliver where it best pleased them, as is now the course pursued in Chicago, which, whether lawful or not, is unjust to the shipper, whether farmer or dealer, and capable of great abuse as in case of combinations with warehousemen. Unless some of our roads adopt a little more common sense by discharging certain general freight agents the Legislature of our State will step in and compel them to toe the mark. The trouble, we apprehend, is with the percentage that is divided with certain managers. Of this we may have more to say.

The Marsh Binders.

Fifty of these machines are being made for the next harvest, enough to test their value. If they succeed as anticipated, they will produce a vast saving of labor in the harvest field. With it two men do the binding the same as on Burson's binder, saving the cost of wire. We shall endeavor to see a machine at work during the harvest, when we can the better judge of its merits.

FLAX FIBRE MANUFACTORY AT AROMA.—The Northwestern Flax Co., of Chicago, Messrs. Belcher, Gould & Hodges, have purchased power of Mr. Beardsley, of the Aroma Mills, and are about putting in machinery for the manufacture of flax straw into fibre and its conversion into cloth.—They expect this season to manufacture bags, and for that purpose are securing workmen and machinery. H. N. Corey, the agent of this Co. offers to loan seed on favorable terms, and makes favorable propositions for the purchase of straw. He also offers several liberal premiums for the best fields of flax, varying from two to twenty acres. We will notice their operations and propositions more at length next week.—*Kankakee Gazette*.

Thus one after another valuable interest springs up about our country. Linen bags are worth more than double those of cotton. Go ahead, gentlemen, better thus invest your money than in wild lands.

ORCHARDS IN WISCONSIN.—Last spring, in passing a large, finely kept farm, we were struck with the "pound foolish" economy of the proprietor in the setting of his orchard. Two or three hundred healthy looking apple-trees had been put out in his meadow! Small holes, and barely dug through the sward, were the graves into which he thrust his trees; not so much digging as would have been needed for fence posts. And what the results? But three trees were alive, and those on their "last legs"—dying. By this time, probably, the man has come to the conclusion that apple-trees don't pay! His fence posts will be as likely to bear fruit, for they were better set.—*Wis. Chief*.

Well, that is the way they do up young orchards sometimes hereaway. The practice will answer for the rich who have the money to spare for the trees and—fruit, but a bad one for the farmer of moderate means.

RUTA BAGA TURNIPS.—Mr J. B. Kendall, reports to the Middlesex, Mass., Agricultural Society, the following as his method of growing the crop the past year.

"Sowed about the 25th of June, on land broken up last fall. I manure with green barn manure, in rows three feet apart; cover with plow, and rake off enough to run the sower. When of proper size, thin the plants to within ten or twelve inches of each other. By this method I seldom fail of a good crop."

SURROUNDINGS OF HOME.—In passing through the country, the eye quickly takes in the surroundings, and the mind as quickly approves or repels them. Farms and dwellings, like men and faces, have their language which is read at a glance.

We often see a large, expensively reared dwelling, glowing in its unrivalled white, and no surroundings to give it an air of home comfort. If a tree has been put out in the yard, it is stunted or broken down; shrubbery ditto. The orchard is but a collection of ill-kept, ill-looking trees, choked with suckers and browsed by the cattle. A few unkempt currant brush may possibly appear in the garden. A rough grape trellis stands among the weeds, but the vine has never been able to reach it with a single tendril. A few stools of raspberries, never pruned with the knife, tenaciously cling to the sward by the fence. And through the fierce summer's heats or keen winter's cold, there is not a tree to cast a shadow or to break the blast.

Again we see a low, unpretending home—sometimes logs—surrounded with fruit trees of various kinds, and sheltered by a grove, and a rustic frame by the door, woven over with vines or climbing roses. The very heart warms while we take in such surroundings, and away through the bleak winter fields we see the days of spring on the march, with the music of bird and waters and their banners of leaf and bloom, soon to "go into camp" by the pleasant home, and the fruit trees and shrubs to bend under the wealth of blossom promise. As our friend Dunlap says, "it is just as easy to live on a farm as to stay on one"—*Wis. Chief.*

Well, Bro. Brown, that house is on the road just — miles from town. Last autumn he invested five dollars with a tree peddler, but he thinks the trees are all dead and that our climate is not adapted to fruit growing.

The other home you mention is on the same road, about a mile beyond. You have done it no more than justice—the family live there.

Neat's Foot Oil.

"H. K." in Co. GENT. of March 31st, asks, "what is Neat's Foot Oil, and how is it made?"

Neat's Foot Oil was originally made by boiling cattle's feet and legs and separating the oil from the mass, by skimming it from the surface of the water. It is now more extensively made, or, what is essentially the same thing, by separating the oil from beef tallow, by pressing, as lard oil is separated from lard.

Nearly forty years ago, Samuel Judd, then a great oil merchant of New York City, advertised large quantities of Neat's Foot Oil. It was then a surprise to those not familiar with the treatment of tallow, where Mr. Judd obtained so much Neat's Foot Oil. It is now extensively manufactured in the oil and candle factories in most large cities.

MESSRS. EDITORS—I notice on page 208, an inquiry from H. K. about "Neat's Foot Oil." In answer—it is manufactured from cattle's feet. The skin and sinews are taken off, leaving the shin bone and hoof. They are then closely packed in tanks, and slowly boiled, either with the aid of steam or over a fire. Steam is best, as they can

be boiled more steadily. In making good oil great attention is given not to boil too hard, as it thickens and wastes by mixture with the water, and will not easily separate after.

W. D. H.

THINGS IN WISCONSIN.—The Government may want men but the people want butter. Gold "80," and the butter mounting after it. Butter is the universal cry; butter, butter, butter!

Choked be the man who invented the use of butter. Hain't fit to eat. Never liked it. Would not have the vile stuff in the house. Won't allow the children to touch it. Never *could* bear it. The man would insult us who'd offer us enough to lubricate a crust. In the language of the psalmist,

This world is all a fleeting show,
In city or in town,
For people hold their butter low
At thirty cents per pound!

A word about the weather is in order. "What weather;" "have you sowed any wheat?" These and similar expressions are current coin between the men of the soil. And they indicate an interest which pervades all classes. How deeply and broadly does the work of the plow underlie the vast superstructure of a nation's prosperity! From the seed time springs the hope of all. From the harvest field the healthful current of a nation's life. The gamblers of Wall street may play with their gold, but the men of the burnished share and blade, stand proudly between them and the Father who giveth bread. The furrow unturned, the fire would go out on the forge, the hammer cease to ring on the anvil; the spindle cease its hum; commerce foul its sails and the ship rot at the wharf; dust gather on the ledger and grass grow where the Bulls and Bears toy with the weal of their country in its hour of peril.

"Will it ever come good weather?" Let us hope. We have the promise of seed time and harvest. The almanacs announce spring. The birds have so understood it. Men of wondrous faith have made gardens. Hay is short and butter almost ceased to be in many localities. For winter at this late day to linger in the lap of spring, is improper in the extreme. Our "City fathers" have regulated the rum traffic; can they not regulate the weather? The weather is evidently "out of health;" cannot our stoutbacked Republicans do something for it?

Well, well, we borrow no trouble about the weather. It has our permission to take its own course! That spring is coming, we believe. For ten days, the first pale wild flowers have been awaiting a ray from the sun. And many a bud, too, is watching a chance to toss a soft green pennon to the winds.—*Wis. Chief.*

Hoven in Cattle.

This disease is usually brought on by cattle being removed from confinement and winter feeding to the luxuriance of the clover field. In the article on *Veterinary Science* in the new *Encyclopaedia Britannica*, the oils of linseed and turpentine are stated to be nearly a specific. For a large animal take linseed oil raw, one pound; oil of turpentine, from one to three ounces; laudanum from one to two—and after mixing, administer the whole at a dose.

[From the Co. Gent. and Cultivator.]

Farmer's Gardens.

PUTTING IN THE SEED.

In regard to planting a farmer's garden it may not be to first say how not to do it; though in doing so I have to condemn the practice of many farmers. The most important of anything not to do is to wait; don't wait till done sowing spring crops and you are over your hurry, and then go on and prepare your garden and plant it all at one time, and expect that to answer all purposes, when if it does well, there may be something raised, but if any portion fails, why that is the last of it. That some Vegetables may be very well grown in this way, is probably true though many kinds, like potatoes, peas, onions, and not a few other things, will necessarily be late, and more or less of the most tender probably a failure.

But for all desiring a good garden it is a great deal better to begin as soon as the ground will do to work, and the garden ought to be, and if prepared as recommended (on page 207) it almost always will be, the first land dry enough to work on the farm. But here I wish to say if the garden is necessarily on a rather heavy cold soil, it would be an excellent plan to put a good coat of sandy or gravelly loam—a good gravelly loam is generally warmest—on to a part of the upper side of the garden, which, with manuring, will make the land dry enough to work soon after the frost is out and the ground settled. This small plot may be spaded up and prepared and planted to some of the choicest early vegetables, as peas, beets, onions, radishes, lettuce, cabbage for transplanting, &c., and if there is enough for a few of the very earliest potatoes, all the better. It may also be well to state that in many gardens where there is no part that has had, or perhaps has needed, any sand or other addition but manure, there is a warm sunny corner or part of the garden that is dry sooner than the rest, and as frequently weeks may be gained by taking advantage of a day or two of warm, drying weather when only such part can be worked, it would be an excellent plan to spade up and plant such a corner or part in the manner indicated. The Vegetables grown on such a patch will be very early, if well tended, and be very gratifying to every family.

But whether a part is spaded and planted before the rest or not; the rest, or the whole garden, should be thoroughly plowed—no working farmer will be willing to spade a garden half or a quarter as large as will be needed—and prepared as soon as it is dry enough to work. Then a little calculation should be made in regard to the amount of ground to be devoted to the different kinds of Vegetables. First lay off a portion for early potatoes, which should be large enough to supply the family till some of those grown in the field are put in the cellar. Then a portion for large marrowfats or other large garden peas, which should be the main crop for green peas after the earliest, and should not be sown broadcast; and if put in very early, and pretty thick, they will get and keep the start of the weeds.

There should be enough sown to have all the family can use, and some for their less provident neighbors, and if a part is left after the season is over, the vines can be cut and fed to the hogs. Next lay off the ground for the cabbage and root

crops raised in the garden. With these, as well as peas, it is best to be sure and have enough, as any surplus will sell well, while they are profitable to raise to feed. The rest of the garden may be devoted to sweet corn and the many and various other things that should be raised in a good garden, care having been taken to provide room enough for them all.

At the first planting all that the season will allow will of course be put in. Other kinds should be planted as fast as the season will answer. Many are tender, not germinating well in cold, unfavorable weather, or if they come up, are sometimes checked, and sometimes insects destroy the first planting. Consequently it is necessary to have plenty of the different kinds of seeds, and make calculations for frequent planting, some of which will be sure "to hit the season right," or by proper attention be saved from all insect depredators.

In regard to the different kinds of seeds, allow me to say, I am not going to recommend many novelties, nor only such as are considered very choice or extra kinds, and are very scarce and high priced, but only such as I know are what every farmer ought to have. For early potatoes, few farmers want any of the very small, though very early kinds, but they will prefer something like the kind I use, which are here called the Early June, but which more nearly answers the description of the Mountain June. We begin to use them about or soon after the fourth of July. They grow to a good size, and give a fair yield of good quality during their season. There should be a good bed of some very early peas; the early Kent or Daniel O'Rourke will answer very well. The earliest I have raised, out of ten or more kinds, is called the Queen of Dwarfs. The early York, or large early York cabbage—the latter the surest but later—should be raised for summer use, and some larger kind for winter. I give a decided preference to the Marble-head mammoth drumhead; but the large drumhead or flat Dutch, answers very well. Darling's early sweet corn is the best I have been able to obtain. There should be several plantings, a little very early, more about the usual planting time, and two or three weeks later, another planting. There should be enough in all to have plenty to use, which, in most families, will be a good deal, as it is first rate, and goes a good many weeks, and plenty to dry for winter use. Of onions, there should be a bed of sets, or multipliers, as they are called here, for early use. For fall and winter use, there should be a good large bed of red, or white Portugal, the latter the best. I have never found any beats that will compare with the early Bassano. We have them by the fourth of July, and probably use more in that month than any other in the year; but we use the same kind for winter, sowing some later for that purpose. The long blood is a good late kind. The early short green cucumber has given the best satisfaction to use green and for pickles, of any I have tried. Of squashes, the Summer Crookneck and early scollop, for summer use, and Hubbard for winter, are probably as good as any. The sweet German turnip is decidedly the best for the table of any I am acquainted with. Carrots, early Horn and long Orange. Parsnips, long Dutch and Hollow Crown. Beans, tomatoes, radishes, and lettuce, are so common, and the seed is so easily raised, or saved, that probably every one has a

supply, or can easily obtain it in their neighborhood. But at the same time it will be best to only plant what is known to be good, and never plant any poor or inferior kinds, because "the seed don't cost anything."

Every garden, of course, has, or should have, a good asparagus bed, and plenty of pie plant. If these are not already provided, good directions for their culture can be found in back numbers of Co. GENT.

I have only referred to the more common and staple crops for the farmer's garden. There are many other kinds that can be, and more or less of which will be grown, as may suit the taste or convenience of the farmer; but, as they will only be such things as he is more or less acquainted with, no special directions will be needed. With the ground well prepared, and planting and hoeing well and seasonably done, of course, whatever is tried will be well grown.

As to garden fruits, in view of the great amount of valuable information in regard to their culture contained in the Co. GENT., it would seem to be superfluous to do more than to urge farmers to pay more attention to them. But there are yet so many that entirely neglect most kinds of these fruits, particularly berries, that I cannot close without urging every farmer that has not these or some other kinds—to set a good bed of Wilson's Albany seedling strawberry, and also one of Doolittle's black cap raspberry. These are so productive, hardy, and easily grown, that I can hardly imagine how can any one fail of being well satisfied for his trouble, or see why they may not lead to the cultivation of many other kinds and varieties of garden fruits, and eventually lead to raising a good supply of many of the best kinds.

But long before planting will be entirely out of the way, another important operation will have to come into play, that is hoeing the garden. This will be attended to in the next and concluding number.

F.

Western New York, 1864.

From the American Agriculturist.

Early Beets and Carrots.

The earlier these can be had, the more acceptable they are, and with a little pains they may be brought on much earlier than usual. The soil for both should be light, warm, deep, and rich with manuring the previous season. The best early variety of beet is the Bassano, or, as called by some, the Extra Early Turnip Beet. This, though not large, is quick growing and very good. Soak the seed in warm water for 24 hours; pour off the water and keep the seed covered in a warm place until the sprouts begin to show themselves, then roll the seed in plaster and sow.—In treating the seed in this way, do not let the sprouts get too long, as there is danger of breaking them, but sow as soon as they begin to show themselves as little tender points breaking through the shell of the seed. Sow in drills, 12 or 15 inches apart, and when the plants are 2 or 3 inches high, thin to 8 or 10 inches in the row. As the beet seed is really a sort of cup, or capsule, containing two or more seeds, it often happens that two or three plants will come up so close together as to appear like

one.—These crowded plants should be looked to and only one left. If there are any deficiencies in the rows, they can be filled by carefully taking plants from the crowded places and transplanting them. Hoe often and weed thoroughly.

The Early Horn Carrot is the best early. Soaking the seeds in tepid warm water for two days will hasten their germination. A Friend informs us that he gets carrots up in three or four days by keeping the moistened seed in a warm place for five days and then drying off in ashes or plaster. We have not tried this plan. An ounce of seed will sow 150 feet of drill. Sow in 15 inch drills, cover half an inch, and thin to four inches. As the plants are very small when they first show themselves, it is a good plan to sow a few redish or turnip seeds with those of the carrot seed, in order to distinguish the rows readily at the first weeding.

[From the Canada Farmer.]

Estimating the Weight of Cattle by Measurement.

Many experiments have been made by graziers and salesmen to ascertain the net weight of cattle by measurement, and a number of rules and tables have been formed from the results obtained. None, however, can be regarded as absolutely correct. With the most accurate measuring is required a practical acquaintance with the points and forms of animals, and allowance must be made according to age, size, breed, mode and length of time of fattening, etc.; conditions which require a practical eye and lengthened experience to correctly appreciate. We have found the following method to lead generally to trustworthy results:

Measure carefully with a tape line from the top of the shoulder to where the tail is attached to the back; this will give the length. For the girth, measure immediately behind the shoulder and fore legs. Multiply half the girth by itself in feet, and the product will give the net weight in stones of 8 lbs. each. For example with an ox or cow 5 feet in length and 7 feet in girth, the calculation will be as follows:

Multiply half the girth by itself in feet.....	3.5
	3.5
	12.25
Multiply by the length in feet.....	5
	61.25
Weight in stones.....	61.25

[From the Detroit Free Press.]

The Wheat Crop in Michigan.

The warm rains for the last several days have materially improved the wheat prospects in this State; and yet we do not consider that the chances of over two-thirds of a crop are by any means great. All the conditions of the season will have to be favorable to produce a full two-thirds crop. The favorable weather thus far in this month has undoubtedly had a strong tendency to give many of these "stools" that were seemingly dead such a start that they may produce a good article of wheat. It was thought in the fore part of March that the "winter killing" would result in the growth and

production of a very inferior article of wheat while many of our farmers feared that much of the wheat, as a result of winter killing, would turn entirely to "chess."

From the Working Farmer.
Salt as Manure.

According to an experiment made by Mr Lawes, of England, wheat, *on his land*, received no benefit whatever from the application of salt, either in grain or straw. He had always used 4 cwt. of salt per acre, with other fertilizers, upon his mangolds, in the regular course of farm practice, but was led, by the failure to derive any benefit from it on wheat, to test with care the yield of this root with and without salt; and evidently to his own surprise, land without salt yielded 31 tons 2 cwt. of mangle roots per acre, while that to which 5 cwt. of salt per acre had been applied, produced only 20 tons 10 cwt. of roots, and that which had received 10 cwt. of salt per acre, produced only 18 tons of bulbs. As to tops, "where there was no salt, the produce of tops was 7 tons 6 cwt., where the smaller quantity was applied it was 8 tons 5 cwt., and where the larger quantity of salt was used it was 7 tons 8 cwt. Therefore the result was, that where the smaller quantity was used, there was more top and less bulb, and where the larger quantity was used, less top and less bulb." Although he does not appear to claim this as a decisive experiment, nor that the wheat experiment on his farm would necessarily apply to all England, still he did not hesitate to assert without qualification the belief "that the large amount of money which is expended on salt as a manure throughout the British Isles is *not returned in the produce.*"—Knowing that a commission on the part of the French Government had been engaged in investigating the subject, he also communicated with M. Barral, whose reply shows that that commission reported that *salt was no value as a manure.* In this report M. Barral states that he agrees, in so far as regards the application of salt *alone*, but it is uncertain whether this can be said of it as applied in connection with other fertilizing materials.

Alton Horticultural Society.

SATURDAY, April 2, 1864.

The Society met at the residence of A. and F. Starr Present—Dr. E. S. Hull, J. Curtis, F. Curtis, D. Williams, C. W. Dimmock, H. G. McPike, A. Starr, F. Starr, D. Brown, J. Newman, and quite a number of ladies.

The Secretary being absent, Mr. Dimmock presented copies of Agricultural Reports for November and December, from the Commissioner of Agriculture, and letters received by the Secretary.

1st. A letter from Isaac Newton, Commissioer of Agriculture, stating that flower seeds were not yet ready for distribution, and that there would be no grape vines to distribute among societies the present season.

2d. A note from George Husmann, of Hermann, Mo., giving his definition of a reserve bud:—"I call the reserve bud the two small buds above and below each fruit bud on any strong cane. There

is a small bud above, and one below, each large or fruit bud, which will very often remain dormant, if the principal fruit bud starts in spring; but if that is killed, they will generally push and produce some fruit; though not as much or as fine as the principal bud."

On motion of Mr. Dimmock the letter was filed for publication.

A cane was brought in and no such buds could be detected, and many members seemed inclined to dispute Mr. Hu-mann's opinion.

3d. A note from Mrs. Annie C. Tribble, of Upper Alton, giving the minimum temperature of '55, '56, '57, and '54, as follows:

December 30, 1855.....	8 °
January 9, 1856.....	18 °
January 18, 1857.....	15 °
January 1, 1864.....	22 °

From which it appears that the present year exceeds any previously observed, and that next to it comes 1856, a year very destructive to fruit trees.

The following table from Blodget's Climatology shows the extreme cold of a series of years at Highland, in this county:

1841.....	2 °	1847.....	5 °
1842.....	3 °	1848.....	5 °
1843.....	4 °	1849.....	3 °
1844.....	5 °	1850.....	8 °
1845.....	7 °	1851.....	4 °
1846.....	1 °	1852.....	15 °

The thanks of the Society were tendered to Mrs. Tribble for her kindness in furnishing a copy of the record.

Dr. Hull having lost his paper upon "Roots," favored the Society with his views orally. He believes the spongioles are like the leaves and perish every year and that the large roots are more important than the very small ones.

On motion of F. Starr, a committee consisting of Mr. Dimmock was appointed to obtain the books belonging to the Society.

Mr. Daniel Williams was proposed and elected a member.

On motion of F. Starr, members were requested to collect insects injurious and beneficial for a Society's Cabinet. Also to investigate the real benefit or injury occasioned by birds.

"Birds" were made the subject for discussion at the next meeting.

The time of meeting was made the first Friday of each month, instead of Saturday as heretofore.

Adjourned to meet at D. E. Brown's on *Friday, May 6th*, at 10 o'clock, A. M.

After a sumptuous dinner, at which a superior article of currant wine, of home manufacture, was procured and tested, a thorough survey of the premises was made by the ladies and gentleman of the society.

The residence and grounds of Messrs. Starr were formerly occupied by Dr. E. S. Hull, and were the field of his early efforts and success in horticulture. The large peach orchard of 3,000 trees, which has so long made Alton famous for choice fruit, has suffered much from the severe winter, and will doubtless, ere long, give way to new trees. The magnificent evergreens, surrounding the unpretending stone house attract the eye from a great distance, and guide to the premises without the necessity of making inquiry. These large evergreens, some twenty, were planted twenty years

since, and some of them are models of unbrageous elegance. They have also a large number of Norway spruce in fine condition and suitable size for transplanting. They have vineyards containing about 1300 vines, mostly Catawba, Concord and Isabella. They have also 1000 cherry trees, 1500 pear trees, 2700 apple trees, and 1000 currant bushes. A large part of the trees last enumerated were planted by Messrs Starr, who have intelligently performed a vast amount of labor, for which they will doubtless find a rich reward ere many years elapse.

[From the Country Gentleman and Cultivator.]

A Cure for Hoven or Wind Colic.

Last fall when making Sorghum Syrup, I threw the skimmings from the evaporator to my hogs. My milch cows being in the yard, they ate freely of it; in less than half an hour I noticed one of my cows swollen to such an extent that death must have ensued had she not got immediate relief. I knew not what to do for her, but necessity, as the old adage goes, is the mother of invention. I reflected for a few moments what was the cause of her complaint. I knew in a minute that it must be fermentation of the skimmings in the stomach.

I was using at the time bi-sulphate of lime to arrest fermentation in the juice of the cane previous to boiling. I thought I would try it for the same purpose in the cow. At a venture I drenched her with about a gill of the lime; the result was that in ten minutes she was better, and in half an hour she was perfectly well. I have no doubt but that it would be equally good in case of wind colic in horses, or hoven in cattle, from eating green clover.

Columbus, Ohio.

GEO. E. GILL.

Walter Brown's Monthly Wool Circular.

NEW YORK, April 1st, 1864.

The domestic wool trade continued to be very inactive during the early part of the month just closed, with a downward tendency in prices. Since the middle of the month, however, there has been more demand from manufactures, and wools, to a fair amount, have been taken for consumption at prices ranging from 7 to 10 cents per pound below the highest quotation of the season. The month closed with a firmer feeling, and with a prospect that manufacturers, who, in many cases, are in light stock, may be induced by the present comparatively moderate rates to come into market for more liberal supplies. A further motive to this course with some buyers may be apprehension that Congress will pass an act amendatory to the present tariff law, imposing an increased duty on foreign wool. Should this measure be adopted, no doubt that purchases made on the basis of present rates would be advantageous to the buyer.

The market is now well supplied with desirable parcels from all the wool growing sections, and holders are generally willing to meet the market—a condition of things which of late has existed to a limited extent only. As a consequence of this condition, buyer and seller being alike inclined to operate more frequent and larger transactions are occurring.

The fluctuations in gold, while they have to some extent affected the price of foreign wools, do not appear to have influenced in any degree the market in domestic fleeces. The most efficient cause in checking the downward course of prices would seem to have been the anticipated action of Congress toward an increase of impost duties.

The demand for pulled wools has been moderate, and they have changed but little in price. We think present rates will be maintained, and should our expectations of an increased activity be realized, possibly an advance in these wools may occur.

California wools have sold freely, and most of the desirable lots have been taken up by the kersey and blanket manufacturers. Some other choice parcels were taken for the fine cassimeres and similar trade fabrics. The stock is light, and must continue so for some weeks to come. Early parcels of the spring clipping will probably arrive by steamer of May next, and if in good condition and free from burs, they will be favorably received.

There has been a good trade in foreign wools of all grades, and prices have not varied much from last quotations. Our late advices from Europe speak of an active trade, and of improvement in prices of the most saleable descriptions.

[From the Philadelphia Commercial List.]

Maple Sugar Crop.

From present indications there is little doubt that the maple sugar crop of 1864 will vastly exceed that made in any previous year. The season has been a good one, and favorable for the early commencement of operations. In all probability the crop of maple sugar at the North for the present year will reach 25,000,000 pounds, worth at the low estimate of 15 cents per pound, 3,750,000 an important item in the sugar product of the country. This will be but a small amount of the sugar consumed in the whole country, yet it will go far toward supplying the deficiency caused by non-production at the South. Few people comprehend the great amount of sugar annually used in the United States. In 1862 it is estimated that the total consumption of sugar, both in the North and South, was 482,411 tons, or nearly 29 pounds to every man, woman and child. This consumption was largely decreased in 1863, and will be still more so during the present year. By the manufacture of sugar from the maple and sorghum, the North may in a few years be independent of all foreign sugar producing countries.

BEE CULTURE.—Among rural pursuits, there is probably no branch of business that pays better than the keeping of bees. The introduction of moveable frame hives has produced a new era in bee culture. The internal economy of the hive is now open to inspection and the nature of the insect can be thoroughly studied and understood. Bee-keeping used to be a matter of luck, or at least of great uncertainty, but the bee-keeper can now, with the facilities furnished him, make it a matter of as much certainty as other branches of productive industry. The past season has been one of comparative dearth in the honey harvest of many localities, and many stocks have starved or frozen to death the past winter. But this should not be a matter

of discouragement, as such a season has not occurred in years, and will not, probably, soon recur again. Seasons of scarcity and dearth occur in all rural pursuits. The wheat crop fails, the corn is cut off by drouth or untimely frosts, and cattle meet with accidents, or diseases, yet no one thinks of giving up these branches of husbandry. Let no one, then, be deterred from engaging in bee culture because of the past untoward season.

The chief reason that deters people from bee keeping seems to be the fear of being stung. Yet bees can be rendered as "harmless as flies." A few puffs of smoke, thrown into the hive, renders them perfectly peaceable, and you can handle them with perfect impunity if you are careful not to hurt them. The smoke of tobacco is the most effectual, acting upon them quickly, but any kind of smoke can be used. A pipe made on purpose, called a "fumigation pipe," is very convenient for this purpose. H. P. Kidder, of Burlington, Vt., manufactures a very neat and cheap pipe for this use. Any one who dislikes tobacco can use it without inhaling the fumes, as the smoke is blown from the pipe. By wearing gloves on the hands and a bee-hat to guard the face and neck, a whole regiment of bees can be defied. A good bee hat can be made by sewing a cylinder of wire-cloth (such as used for the fine sieves of a fanning mill) to the brim of a heavy straw or felt hat. Let the cylinder be large enough to hang clear of the head and face, and long enough to come about down to the chin, and have a piece of thin calico or muslin sewed to the lower edge, to button down under the coat or vest. It should be narrow behind, so as not to rest on, or interfere with, the collar of the coat. No place is left where a bee can get in, and you would be perfectly safe to enter a nest of hornets otherwise well clothed. We have been using a veil, manufactured from black linen thread, that pleases us much. It affords perfect protection, is comfortable to wear, and obstructs the sight but slightly. It slips over the crown of the hat and buttons down under the coat. It is also manufactured by the same party at Burlington. When the writer, years ago, first commenced to handle bees, he suffered very much when stung. Now a sting in hands is not as annoying as a mosquito bite. The more stung the less the system minds it. This I find is the experience of others. By the use of smoke and the bee hat, or veil, the most timid person can handle bees with facility, and with the great increase in the cost of the "sweets of life" we shall look for a rapid increase of bee husbandry.

Rolling Prairie, Wis.

L. L. F.

Immense Glass Structures.

DEAR FARMER:—Having missed my connection by an accident to our train I here spent an hour in the extensive private grounds and grape houses of Capt. E. B. Ward, the wealthy boat owner and manufacturer, and though I expected something extensive, was not prepared for what I saw. Some five years since Mr. Ward built his first grape house, a span roofed building 60 feet long, in which he has grown some choice specimens of the varieties of the Hamburg and the California vines, latterly he has converted it into a forcing house by putting in a flue and arranging it for propagating grapes from eyes, a large and fine lot of which are now coming on. The next year he built a second house

80 feet long in which he now has grape vines and intends to plant out in it this spring a row of Peaches, Apricots Nectarines. The third house is 120 feet long, span roof 22 feet wide. The fourth one 110 feet long, same width. The fifth a smaller house, 40 feet long, which is now used for forcing early vegetables and propagating grapes from cuttings. The sixth building is at least 80 feet long, with the Hamburg grapes in varieties, and others. The 7th to 11th houses, five in number, are each 150 feet long, 24 feet wide, span roofed, three of which are filled with four rows of Hamburg grapes. In one of these houses between the rows of grapes are growing strawberries of the Wilson and Triomphe de Gand varieties, now in blossom and will be out of the way as soon as the grapes make any considerable growth. He is also now preparing the border for four more houses to be put up this season, to be 125 feet long by 24 feet wide. The ground is all thoroughly prepared, three feet deep, by hair and offal from tanners, and manure from cattle yards, &c.

These different houses now contain 1,292 vines, embracing all the choice varieties usually cultivated under glass; a large part of them will give some fruit this year. Out side he has nearly 600 hardy grape vines, embracing some 15 varieties, the Delaware predominating. While selecting vines for this planting he was asked if he wanted some Delawares. Answering no, the gentleman whose grounds he was at asked him if he had ever tasted them. Answering no again, he produced a bunch for him, and with the first taste he said give me 200 of them; this was when the vines were higher than now and before he commenced propagating. His great love for choice fruit seems to find no other vent than to go into the growing to the extent already shown. Such an amount of fruit as these vines will bear cannot of course be consumed by his family and friends, and will most likely be found in market in the season of its ripening. In other parts of his grounds, which are admirably laid out and kept, is a fair show of pear, cherry, and other small fruits, and a choice collection of shrubbery. We here saw a new method of forcing asparagus by setting a hot bed frame over the asparagus bed, banking it up outside with manure, a row or bed nearly a hundred feet long being covered thus, while a corresponding bed outside of it, without it is designed to follow this in succession. These grounds are under the charge of Thos. G. Angell, who seems to fully understand his business and to whose courtesy we are indebted for attention while there.

H. D. E.

—In P. Farmer.

LOVERS OF HONEY may be interested, though perhaps not gratified to know, if they have not already learned that the stock of Bees, in this region, is about used up. Many Bee keepers have lost every swarm, while others, and those most extensively engaged in the business, have barely a remnant left for seed. The cause of this fatality is attributed chiefly to unwholesome food, supposed to have been made from what is known as "Honey dew," a secretion from a worm which infests the oak in the early spring. Wherever stocks were left exposed, the severe winter did the job for them, while many that were housed in warm and ill ventilated cellars, have moulded and thus

become worthless. We do not know how extensive this trouble is, but if that in this section is any criterion, the loss will be found quite serious as well as annoying.—*Berlin Wis. Dem.*

WEEDS.

BY J. S. G., ADAMS CO., PA.

The unusual quantity of weeds prevailing the past year throughout the farms in Adams County, has become a subject of inquiry among our farmers. Who has noticed the vast quantity of sorrel that has been prevailing every where, in all kinds of soils and situations? There, too, along side could be seen the chamomile, the red poppy, or that detestable Shetter-weed, in endless profusion.—Strangers might suppose that farming had got to be such a poor business that we have turned our fine fields into Botanical Gardens; but the difficulty shown in finding out the botanical name of the Shetter-weed, shows how little attention is paid to the subject of Botany in our midst. Our farmers, instead of knowing the various classes of weeds, their nature, their power of impoverishing the soil, care more about knowing how to get rid of them. The science of Botany may be said to have no limits, either in extent or variety; the land and the seed both yield their specimens. Even as an amusement it scarcely has a superior. In walking or riding over the country the attention is always attracted by the trees and flowers. Its moral influence is also beneficial. The science of Botany is the book of nature. The very trees point us to heaven, the very weeds and flowers are marked with a purity, a loveliness which directs above and naturally leads us from nature's works to nature's God. In the most delicate flowers that deck the earth you may read the evidence of a Creator. And yet how strange it is that it is not more a subject of study among our agriculturists! Ask the one-half of them to give you the botanical name of a weed, and you might as well ask them to "square the circle" for you—I suppose the reason is, that no money can be made by attending to it, and that is a conclusive reason in our day. But to return to our weeds. And by the way there is no such thing as weed. Why is the wild flax any more a weed than the violet? there is not a plant that grows but is calculated to act some part in its sphere; either it assists to purify the air by throwing off pure oxygen, its flowers gratify our senses, or its poisonous qualities may be useful in medicine. Dr. Johnson says, "The only fault weeds have is to be out of their place." And the farmers must fill up the place they occupy so as to drive them out of the field; and one way to do this is by sowing clover or timothy unusually thick, so as to produce a shade so thick that the weeds cannot get space, sun, or air; and the grass will in time choke them out. Weeds cannot grow well, if smothered by close adjoining plants. But there are some weeds which start early and get ahead of grass; the only cure for them is to take them out, root and all. Of this kind is the Camelina, or wild flax, which ought to be pulled out. It can be easily done when the ground is wet, as the stem is very tough, like flax, and will bear pulling. It will not do to mow it off before it ripens its seed, because you may in that way make a perennial of it; its sap

will descend and enlarge its roots for another year, and thus when you prevent the forming of the seed if an annual; you may make a perennial of it. I do not say it will in all cases; nothing exhausts a weed so much as producing its seed, and annual plants generally have the most seed, and they mostly die from the effect produced by the sap having all gone to form the seed. Now, if you gather the seed of the Shetter-weed as soon as it is ripe, or take it up by the roots before the seed is ripe, you will soon put an end to it. The seed of the Shetter-weed is a very fine yellow seed, smaller than clover seed. In one pod of it I counted eighteen seeds, and on one stem I counted one hundred and six pods, so that it bears a tremendous quantity of seed. The seed no doubt will make a good oil, but I hope it will never be cultivated for that purpose. The leaf of the plant is not bitter or at all disagreeable; the tops of it taste very much like the radish.—The sheep in the field where it grows will not touch it, but would rather starve.

Some weeds have been noticed in certain spots remaining there for years and then suddenly disappearing. It may be explained in this way: the seeds of the parent plant fall down annually, and of course bring forth the same species the next spring, and so keep on for years until they have exhausted from that spot the particular substance in the soil necessary for their existence, and not being able to form their seed at last, they must die. Some persons may calculate on getting rid of the Shetter-weed in that way; but its seed is so light that the winds will carry it off in all directions. One reason, I think, why we have such an unusual quantity of weeds the past summer is, that we have had such warm wet weather early in the spring, which caused the seeds then lying on the ground to vegetate, and thus get a good start before the dry weather came on. The great quantity of sorrel that prevails can only be killed by large applications of quick lime; as it is a strong acid the lime will neutralize it.

It might be possible that all these noxious weeds have been brought into our country by the droves of cattle and sheep from the west. They have brought them by degrees, bringing them a certain distance one year, and leaving them in the field; the seeds having passed through them in an undigested state, then springing up are eaten by the cattle coming after, and taken on some distance again, until they have reached our field in this way. It is to be hoped our farmers will all pull out, root and branch, the Shetter-weed, and thus effectually get rid of it.

J. S. G.

—*Farmer & Gardener.*

Cooking Food for Cattle.

Wishing to make an addition to one of my barns this season, and being anxious to put in an apparatus for steaming dry food for cattle, and having seen some excellent articles on the subject in the current volume of the *Country Gentleman*, by H. H. PETERS, Esq., of Southborough, Mass., I lately visited his place for further information. Mr. P. is among the largest breeders of pure Ayrshire cattle, if not the largest in the country. His herd now exceeds ninety head, all thorough-bred, full blooded animals, very many having been imported

for and on his own account, selected by his own agent, sent out for the purpose, who is one of the best judges in the Union. The farm which Mr. P. occupies was formerly what is known in the region as a *Milk Farm*. It was one devoted to a milk dairy, to furnish milk for the City of Boston. He still continues that business upon the farm, and has thus had a fine opportunity to test the milking properties of this breed of cattle. After trying nearly all breeds and grades of the different breeds, he has settled upon the Ayrshires, and is making his milking as well as his breeding herd exclusively from full-blooded animals of this breed.

For a full description of his method of preparing the food, I shall refer the curious reader to the articles before mentioned. My object was to become satisfied as to the fact of its adaptability to our region of country. I became fully satisfied, from personal examination of the cattle and the manure, that upon a grain farm, or any other where there is a large amount of coarse fodder, as straw, stalks, or coarse, rank clover or herd's grass hay, at least one-half of the expense of maintaining stock can be saved by cutting and steaming the food. In other words, a person can keep well double the number of sheep or cattle or horses upon the same food steamed, that they can upon it fed dry. If grain be fed, a still larger profit is received. But at the same time, care must be taken to protect the manure in a dry place until applied directly to the land, or an important source of profit will be lost.

Mr. P. has erected a steamer in the cellar of one of his barns, and steams, in properly prepared steam chests, or boxes, about one hundred bushels in each at a time. He has had four years' experience, and he is firmly in favor of the system—as it adds largely to the manure pile, as well as giving a large surplus of marketable hay, which can be sold at high figures—though I think this rule is, to consume upon the farm the grass, grain, and straw and stalks grown upon it.

So entirely satisfied did I become of the great saving by steaming coarse food and grain, that I shall put a small engine into my barn cellar to cut and steam food this winter, even at considerable expense. I shall also sow several acres with corn, as being the cheapest method of supplying a large amount of valuable food for steaming. I expect to winter double the number of cattle that I could on dry food, and at less expense than if fed dry. To be sure, it requires an extra outlay of capital, but then it repays a very large interest, and saves the purchase of more land to furnish winter forage for this increased stock.

I hope to have leisure to give some notes in regard to the system of farming which Mr. P. is inaugurating in that portion of Massachusetts. With ample means,—an enterprising spirit that does not know the word "fail,"—he has literally made "two blades of grass grow where but one grew before," and he is demonstrating that both for public good and financial success, the intelligent application of capital to the improvement of the soil, is of vast public benefit as well as private gain. In the city, the successful merchant or business man simply vegetates, his mind cramped and dwarfed by the frivolities of a highly artificial mode of life. But in the country, and upon the farm, the mind expands by its constant intercourse with the grand

and beautiful objects of nature which are spread out around one with so lavish a hand. And a man feels that he is living for noble ends. T. C. P.

Abortion in Cows produced by Smut on Corn.

The Belgian *Annals of Veterinary Medicine* publishes a statement that the *Ustilago Madis*, or parasitic mushroom, which occurs on maize or Indian corn, as ergot does on rye, produces abortion in cows fed with it. The article says, that in a stable where cows were given maize infested with this parasite, eleven abortions occurred within eight days, when, the cause being suspected and the food changed no further case happened. The author of the discovery then, to assure himself of the supposed fact, dried and pulverized some of the fungi, and administered six drachms of the powder to two bitch dogs heavy with pup, and abortion was produced in each. This statement should be studied and carefully investigated by stock keepers in the United States, and more attention be bestowed by them upon the feed of breeding animals, as it is very possible that many otherwise unaccountable cases of slunk calves can be attributed to diseased corn. Whether the ripeness of the fungus, or its occurrence on green or dry fodder makes any difference, are points to be settled.

EFFECT OF THE AIR ON WEIGHING GRAIN.

There is generally much complaint about cargoes of grain falling short, which have been weighed into vessels at the Western shipping port on the Northern lakes, when they come to discharge at the Eastern terminations of the different routes, as Buffalo, Oswego, Kingston, &c.

It is natural to suppose that grain in these transports should increase in weight to a slight extent, by absorption of moisture: there being scarcely any waste in handling. But like vessels, or their managers, have become so used to "shortage" that they would readily pay \$10, or \$15, per trip as insurance against shortage, and consider it a good operation. It is really quite a tax upon the carrying trade of that region. The reasons assigned are close weight, management sometimes, &c. But there is one item which works against the carrier and tends to make up the deficiency, which is not taken into account. It is the difference of barometric altitude of the points of shipping and discharge. There is not much difference between Chicago and Buffalo—32 feet only, but between Lake Michigan ports and those of Lake Ontario, the difference of altitude is 325 feet. In figuring the difference of buoyancy of the atmosphere at these two levels, and its effect on a cargo of grain of 18,000 bushels, it is found that the difference is 9½ bushels, after allowing one-third to fill the interstices between the kernels, so that a cargo shall represent a solid of two thirds its bulk.

The difference of altitude between Oswego and New York is 262 feet, and between Buffalo and New York it is 555 feet, so there must be still another deficiency in reaching tide water.

Nine and a half bushels of wheat at \$2 or thereabouts per bushel, is quite too much to pay for the

interference of the atmosphere, which refuses to have that much weighed and accredited. "A pound is a pound, &c.," hardly holds good in such a case, and when a transaction of weighing to and from becomes large, as in these cases, it is sufficient to be felt sensibly.—F. A. MORELY, in *Scientific American*.

Advantages of Draining.

Edward G. Faile, Esq., in his late valedictory address as President of the New York State Agricultural Society, made the following remarks.

"From observation of the results of the thorough drainage of land, in which I have had a close personal interest, I am so entirely convinced of the importance of the subject, that I think it cannot be too persistently urged upon the attention of our farmers. I have seen a large meadow of rank, coarse grasses intermixed with rushes, which was wet throughout the year, and did not yield even in pasturage, a tithe of the amount of the interest on its cost per acre, thorough drained with tile in the spring and early summer, fallowed, and the following summer yielding a fair crop of barley. In another case the land was a swamp, yielding absolutely nothing, and within one year, by thorough drainage, it was made to produce a crop of 54 bushels of shelled corn to the acre, which was followed the next season by a good crop of oats, and is now sown to winter wheat, which gives extraordinary promise. There are small portions of similar wet land on many thousands of the farms in this State alone, which in the aggregate would make a large tract, now lying waste and useless, a large portion of which could undoubtedly be reclaimed by tile drainage, and, being generally rich, strong soils, made to yield a good interest upon the outlay, to the owners, and at the same time add to the healthfulness of the neighborhoods, and the wealth of the of the State. In thus speaking of the reclaiming of wet lands, I would by no means be understood as considering the beneficial effects of tile drainage as confined to them. On the contrary, the testimony of the leading agriculturists of Great Britain, where the system has been most extensively practised, is uniform as to its wonderful effect in increasing the productiveness of their clay lands. * * * * We are not without instances of extensive draining by leading farmers of this State, and with strikingly favorable results; but with us it is exceptional, and not general, as in Great Britain, and I would urge upon our farmers the importance of giving the subject more consideration than it has yet received. I am convinced that in Tile Draining there is a mine of wealth, that if worked would add millions to the value of the agricultural productions of our State."

Early Food for Bees.

EDS. PRAIRIE FARMER:—I am pleased to read from so many correspondents that bee culture is receiving so much attention. A late article on bee pasture reminds me of the importance of producing some pasture or feed during early spring, say at least for two weeks before the early or spring blossoms and flowers appear. There are many that used flour, rye or wheat, (generally unbolts.) I hope such will give their experience as to its util-

ity. Having used it myself say from 50 to 100lbs. to 100 hives, daily for at least ten successive days, (such as the bees can work,) I can but report favorably, so far as I have been able to judge of its use, I noticed however, about the tenth day, a floury discharge from the bees, after which I discontinued its use. This was about the time when the first flowers appeared. I think there is no question as to its utility in preventing robbery and in supporting the young, but how much can be safely and profitably used, is a question which those engaged in bee culture should better understand.

L. S. PENNINGTON.

Whiteside County, Ills.

A Country School house and its surroundings.

Two miles north of Philo station on the Great Western R. R. is a school house known as the Eaton school house. The house is twenty-four by thirty feet, Painted white with green blinds and patent seats. Nothing remarkable in all this certainly, for we often see white school houses with green blinds and patent seats, but we do not so often see an acre of play ground snugly fenced in, set with shade trees and embossed with beds of flowers, tastefully laid out and nicely cultivated. Such gems on the wide sea of prairie verdure, just being redeemed into farms do not occur so often and for this reason we take the more pleasure in putting it upon the record.

Let us look a little more about this yard and see what trees and shrubs are planted. The Silver Maple forms the vascular system the stately outlines of the plan, among which are Larches, Pines, Spruces, Balsams, Arborvitæ, Horse Chestnut, snowballs. When these grounds become full robed with their summer drapery we intend to make a pilgrimage thither: We have an idea that the children who attend that school will be more neat and tidy in their appearance, more respectful and intelligent than those in school houses standing out in the open highway, around which the cattle gather from the open prairie in fly time, to seek the shade, brush the flies or listen to the noisy conning of half studied lessons.

STRAWBERRIES AND PEACHES AT COBDEN —Chas. Galby of Cobden (South Pass P. Office) writes us that "the Strawberries are coming out finely and that nearly one hundred acres will be set out this spring. The Willson is almost exclusively planted.

Young Peach trees all right, while large seedling trees and those which bore large crops last season are injured and in many cases dead."

SIX THOUSAND of Wood's Prize Mower were sold last season. See advertisement.

Special Notices.

AGENTS.—We do not appoint any agents—all are voluntary. Any person so disposed, can act as agent in any place.

ENLARGE YOUR CLUB.—Will not the friends of the ILLINOIS FARMER inquire how many copies of the FARMER are taken in their respective offices, and pass around among those who ought to have their names added to the list? Our terms are so low to clubs of ten and twenty that we ought to have one or the other made up at every office in the State, and at every office in Central Illinois, one of twenty or more. Will our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?

TO SINGLE SUBSCRIBERS.—You receive the only copy of the FARMER that goes to your post office. Can you not send one, two, three or more new subscribers, without any trouble? Try. Sample numbers, etc., sent free.

DRAFTS.—Those remitting us large amounts of money, will please send us drafts on Springfield or Chicago, less they exchange. If you send cash in a letter, be sure that it is well sealed and well directed, to Baker & Phillips, Springfield, Illinois.

THE FARMER AS A PRESENT.—Any of our subscribers who wish to make a present of the ILLINOIS FARMER for 1863, can have it at the lowest club rates, when out of the State. For fifty cents you can treat your Eastern friends to a Western Agricultural Paper. In no way can you invest that amount to so good advantage to emigration.

SEND NOW.—Any person who remits pay for a club of ten or fifteen, or any other number at the specified rates for such clubs, can afterwards add to the clubs, and take advantage of the reduction. Thus a person sending us five subscribers and three dollars, can afterwards send us three dollars more and receive six copies.

TO THE CASUAL READER.—This and other numbers of the ILLINOIS FARMER will be sent to many persons who now use it for the first time. Will they not examine it, and if they like it, subscribe for it, and ask their neighbors to subscribe? Sample numbers, prospectuses, etc., sent free to all applicants. See terms elsewhere.


HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighborhood, can easily make up a club of five, ten or twenty, but no time should be lost in doing so, for your neighbors may send east for their


paper which, though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us Western farming.


HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage:

1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it.
2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them.
3. Get post masters interested. They see everybody, and are efficient workers.
4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers.
5. Begin now, before the agents of Eastern papers get up their clubs.

This last hint is especially important. Let us hear from you soon. See terms elsewhere.

 Clubs may be composed of persons in all parts of the United States. It will be the same to the publishers if they send papers to one or a hundred post offices. Additions made at any time at club rates. We mail by printed slips, which are so cheaply placed on the papers, that it matters little whether they go to one or a dozen offices.

 Correspondents will please be particular to give the name of the post office, county and State.

 Specimen numbers will be sent gratis, upon application.

 Address

BAKER & PHILLIPS,
Springfield, Illinois.

SPECIAL NOTICE.—For terms see prospectus on last page. All exchanges and communications for the eye of the editor should be directed to ILLINOIS FARMER, Champaign, Illinois. Electrotypes and business matters, and subscriptions, to the publishers, Springfield, Illinois. Implements and models for examination should be sent to the editor. The editor will, so far as it can be done personally, test and examine all new machines and improvements submitted to his inspection. He will be found at home, on his farm, nearly all of the time. So far as it is possible, the conductors on the Illinois Central Railroad will let off passengers at his place, which is directly on the road, three and a half miles south of the Urbana Station, now the city of Champaign.

State Fair.

The *Quarterly Journal* of the Illinois Agricultural Society for April is at hand, and contains the list of premiums for the next Fair, which is to be held at Decatur, commencing September 12th.—The list is much more extended than that of last year.

The grounds at Decatur are the best in the United States, when we take into consideration ease of approach, abundance of good water, shade and well drained surface. If the people of Decatur wish to retain the Fair at that point, they will make an effort to accommodate visitors on more liberal terms than last year.

A GOOD LOAD.—A farmer took a single load of produce to Syracuse, and sold it for \$1,588.50. It was the wool produced by his 380 sheep. Farming and wool-growing will always pay in this country. It can hardly be overdone. A young man properly educated to the business can be almost sure of a fortune; while in other pursuits, not one in twenty ever gets beyond a comfortable living, and a large proportion fail even of that. Still our boys and young men nearly all rush into mercantile, mechanical or professional life, to meet the inevitable and sharp competition which they are sure to find there. In agriculture the competition is light. A farmer is sure of a good price for all he can produce.

Advertisements.



THE PRACTICAL SHEPHERD,

A COMPLETE TREATISE ON THE BREEDING, MANAGEMENT AND DISEASES OF SHEEP.

BY HON. HENRY S. RANDALL, LL. D.,

Author of "Sheep Husbandry in the South," "Fine-Wool Sheep Husbandry," etc., etc.

PUBLISHED BY D. D. T. MOORE, ROCHESTER, NEW YORK.

From the New England Farmer.

THE PRACTICAL SHEPHERD—Is a work that has long been needed by our people. It should be in the hand and head of every person owning sheep.

From J. H. Klippart, Sec'y Ohio State Board of Ag'.

I shall with great pleasure recommend the "Practical Shepherd" as being the great American work, if not really the best work in the English language on the subject.

From Hon. I. Newton, Commissioner of Agriculture.

I beg to thank you for the very interesting work, "The

Practical Shepherd." It was much needed, and fully supplies the wants of the farmer.

From the Maine Farmer.

The name of the author, Hon. H. S. RANDALL, is a guarantee of its completeness and reliability.

From the Prairie Farmer.

The illustrations of sheep are by the best artists of New York, and well done. The letter press and paper are all that could be desired in a work of this description. It will undoubtedly meet with the large sale its merits demand.

From Col. B. P. Johnson Sec'y N. Y. State Ag'l Society.

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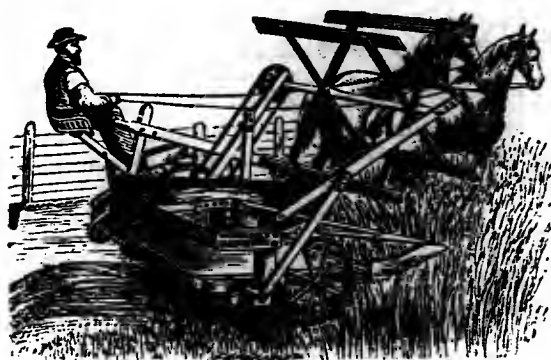
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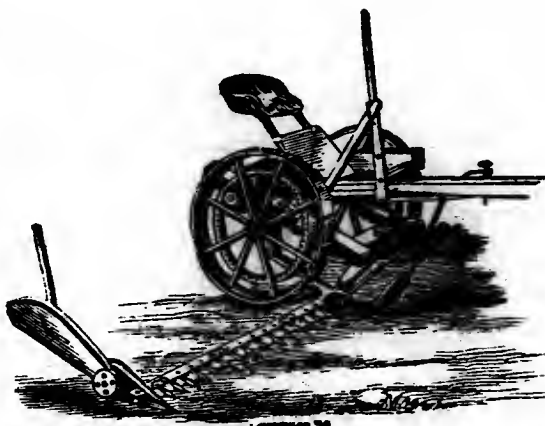
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A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE.

PUBLISHED AT

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BY

BAKER & PHILLIPS,

AND IS EDITED BY

M. L. DUNLAP, Tribune's Rural.

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LARGEST PRICES

the market affords, by giving such reliable information that is obtainable concerning the markets at home and abroad—the cost of forwarding produce to market, and other attendant expenses—thus enabling the producer to take advantage of the conditions of the market in dispensing of his produce.

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THE ILLINOIS FARMER.

VOL. IX.

SPRINGFIELD, ILL., JUNE, 1864.

NO. 6.

The Illinois Farmer,

DEVOTED TO THE

FARM, THE ORCHARD AND THE GARDEN,

PUBLISHED BY

BAKER & PHILLIPS,

SPRINGFIELD, - - - - - ILLINOIS.

M. L. DUNLAP, Editor.

All business letters should be addressed to the publishers.

EXCHANGES and all matters pertaining to the editorial department, must be directed to ILLINOIS FARMER, Champaign, Ill., as the editor resides at that point, and is seldom at the office of publication, from which he is distant over eighty miles.

* * For terms see prospectus and special notices in advertising department.

June.

June is a glorious month. Spring has just turned over to her use the small fruits, the strawberry, the currant, the gooseberry, the May Cherry and the raspberries,—a list of goodies that would have pleased the old epicures, but alas, they had to leave this world without feasting on them; but we, a more fortunate race, may enjoy them to any extent that heart may wish.

Beautiful and pleasant and full of luxuries as June may be, yet we must mix labor with the enjoyment, for June is the great weed killing month. If she is crowned with roses, and her walks

flanked with the acid fruits, yet the corn rows are filled with weeds that must be smothered with the cultivator or wed out with the hoe.

Labor ought to be pleasant amid such an array of use and beauty as is now presented! Ah, well, the picture is at fault, after all, for roses bloom only when planted and cared for. The strawberry does not grow on bushes or weeds, but in the garden, with good attention; the currant and gooseberry must be well tilled, and the May Cherry must needs be out of the reach of the farm stock. These things come only by the sweat of the brow, and are best enjoyed by him who has planted and cultivated them. They please him from the first opening of the leaf buds, the expanding of the flowers, the gradual swelling of the fruit, and at last when the good wife puts them upon the table the measure of his hopes is full. He who buys them in the market has but one feast, while the grower has been feasted along the growing way, with their foliage, their flowers and the maturing fruit.

June begins to reap of the labors of spring, and is making great preparation for the autumn. Never can we see a more busy, hard working June than the present. The last twenty thousand for the army have left us their work to finish up, will give us little time for play. It will be work early and work

late, while the brains must be added; brains in farming have become a staple commodity quite indispensable. Lay well your plans and steadily carry them out; get the best farm tools and keep them in the best of order; look to your hired hands and see that they keep their tools in order and lay out their labor to the best advantage. Watch your bees and keep out the miller; if they have not plenty of flowers sow buckwheat for them.

The trees planted last fall, or within the past two months, may now have the mounds taken from them, if they have been banked up, and the roots mulched with well rotted manure. If the heads of the newly set trees have been properly shortened in, no leaves or shoots should be taken from them; they need all the new leaves to develop the roots.

If you do not live well this month lay the fault to your own neglect.

The Fruit Prospect.

In consequence of the unfavorable winter, people are anxious in regard to the fruit crop, a crop that has become a necessity and the loss of which is almost, if not quite, as serious as that of the potato crop.

Since our trip of last January to the orchards in the south part of the State, we have not been five miles from home, and must write now mostly of our own ground. At this date, May 14th, we have determined the amount of blossoms or their absence and are thus enabled to foreshadow the prospect.

THE APPLE.

Never have we seen a better bloom on the orchard, and with short, well matured wood, the indications must be taken as favorable to an abundant crop

of this fruit. Many varieties in the orchard are white with bloom. Nature always has some compensation or counterbalance to severe losses, and in this case she appears striving to make some amends for the loss of the peach crop.

PEARS.

This fruit comes out equally fine with the apple, but as the tips of many varieties were more or less frosted, we shall look for a large falling off of the embryo fruit, yet we do not despair of a full crop. Thus far this fruit has given us great satisfaction. Since the plan of setting the dwarf pear below the junction of the graft the trees stand well and make a good, healthy growth. Our list is reduced to something like a dozen varieties, which may account for our success to some extent; instead of running after the new sorts we have been content with a few well tried old friends.

PEACH.

The winter has proved very disastrous to this fruit, not only killing the crop but large numbers of the trees. It is probable that most of the old trees are either dead or will die during the summer. The borer in many cases has injured the trees which will hasten their end. But we have a worse enemy than that—the *curl*. We see indications that this disease is attacking the trees, and in case of the old trees, weakened by the winter will doubtless finish most of them. The picture that we drew of this fruit in January, is proving too true, and as there indicated, the young trees will be all that is left to tell the tale of the winter of '64. We have great faith in the peach for this part of the State, but it must be by continued planting and the dependence on young orchards. Two or three crops

always weaken the trees, and when followed by a severe winter they succumb at once; in that case we must have young trees to take their places, when but a single crop of the fruit is lost.

Suppose B. planted a thousand trees in the spring of '59, and that they began to bear in '60, giving four crops, the last a full one. We will also suppose the borer to have damaged them to some extent, then came the hard winter of '64; the trees began to leaf out in a sickly manner and are then attacked with the *curl*, and of course die. The orchard is ruined and must be dug up. In the spring of '65 B. plants again, and has a crop in '67. By this method he will have peaches, say three out of six years. We ask our readers if this is not the usual practice.

Now we will suppose K. planted 200 trees in each of the years '58, '59, '60, '61 and '62, the last planting would be two years old, and those of '61 three years old, neither of which are seriously injured, his prospects for a crop in '65 are good; and as but few peaches can thus be grown for want of trees, he will get double the usual price. Now, is it not evident that K. with the same outlay will make more money out of his peach orchard than B.? If we want peaches we must plant trees annually, and we will have fruit on an average of five years in six. In the winter of '56 the peach trees were then more or less killed, but the two and three year old orchards were uninjured, and those bore seven consecutive crops, but are now killed. We can point to two orchards in this county that are in this condition. Hereafter we shall be particular to plant out a small orchard every spring, and thus have a young orchard to rely upon. We have, to some

extent, but not as fully as we should have done. The necessity of this course is now patent to us, and we shall be direct to our duty if the spring is allowed to pass without the planting.

PLUMS

Show about half a crop, but there is so few trees that no very accurate estimate can be had. We shall now risk a large plum orchard to be set out next autumn, in which the Lombard will figure largely.

APRICOTS AND ALMONDS

Are seriously damaged, and the remarks on the peach will apply to both of them.

CHERRIES.

The May Cherry (Kentish of Downing) shows about one-third of the usual bloom, and will probably give half a crop. The May Duke, Reine Hortense, Bauman's May, and a dozen other kinds of sweet cherries six years planted, do not show a single blossom. The English Morello always blooms full, but thus far has not held its fruit satisfactorily; the same is the case with May Duke. We have one tree of May Duke, planted in the spring of '46, that always bloomed full, but in all that time has not matured a bushel of fruit, though nearly a foot in diameter; it is now nearly dead, having been on the sick list five or six years.

GRAPES.

All grapes that were laid down and covered promise an abundant crop, but unfortunately, as Dr. Shroeder says, we are a set of careless Americans. As the Dr. has taken a vow not to again follow in the footsteps of his adopted brethren, we propose to join him and not again leave our grapes out in the cold. Of grapes, more hereafter, as we

cannot do the subject justice in this short review.

BLACKBERRIES.

So far as we can learn this crop is a failure, or nearly so, our new Improved Egyptian among the rest. Canes slightly sheltered promise a crop, but it is yet too soon to determine the full extent of the damage.

RASPBERRIES.

The Purple Cane and the Black Cap are in the most promising condition, and we are now extending our plantation from the young tips. We cannot too strongly urge attention to this fruit. While the blackberry is uncertain, the raspberry gives us annual crops of the most delicious fruit. We are clearing our grounds of the whole row of suckering raspberries, as they are of no value as compared with the two named.

GOOSEBERRIES AND CURRANTS

Promise an unusual crop. The Ohio Prolific is quite a favorite with us, from the fact that it is more upright than the Houghton.

STRAWBERRY.

The Early Scarlet commenced blooming the first inst., and to-day the whole family are out in full floral regalia. The plants are strong, and the promise of a full crop was never better.

On the whole we have little cause to complain, but should be thankful to the all-wise Giver for such a bountiful prospect before us.

Agriculture.

Report of the Agricultural College of Iowa.

The Secretary, Gov. W. D. Wilson has sent his report for 1863, being the fifth of the series. It is a closely printed pamphlet of eighty-eight pages:

OBJECT OF THE INSTITUTION.

The Iowa State Agricultural College has for its

object, to associate a high state of intelligence with the practice of Agriculture, and the industrial or mechanic arts, and to seek to make use of this intelligence in developing the agricultural and industrial resources of the country, and protecting its interests. It proposes to do this by several means:

1st. As a purely educational institution, its course of instruction is to include the entire range of the Natural Sciences; but will embrace more especially those that have a practical bearing upon the every day duties of life, in order to make the student familiar with the things immediately around him, and with the powers of nature he employs, and with the material through the instrumentalities of which, under the blessings of Providence, he lives and moves and has his being; and since Agriculture, more than any other of the industrial arts, is important to man, and since, for the complete education of its principles more scientific knowledge is required than for all other industrial arts combined, it follows that this should receive by far the highest degree of attention.—The course of instruction is to be thorough, so that it will not only afford the student the facts of science, but will discipline his mind to habits of thought, and enable him fully to comprehend the abstract principles involved in the practical operations of life. In doing this it is not deemed possible to educate every agriculturist, artisan, mechanic, and business man in the State, but to send out a few students educated in the college course, that they, by the influence of precept and example, may infuse new life and intelligence into the several communities they may enter. A single individual, who is thoroughly educated in the principles and practice of an art, followed by a community, will often exert a more salutary influence upon the practice of this art, by the community, than would result from sending the whole community to a school of lower order than that which he attended. A single practical school of the highest order in Paris, (the Ecole Polytechnique), during the last generation, made France a nation celebrated alike for profound philosophers, great statesmen, able generals and military men, and civil engineers. If one high school of this practical character is established, subordinate schools, affording the elementary education of the latter, will follow in due time.

2d. As a practical education the Trustees of the Iowa State Agricultural College have adopted the fundamental principle, that whatever is necessary for man to have done, it is honorable for man to do, and that the grades of honor attached to all labor, are dependent upon the talent and fidelity exhibited in performing it. It is further considered essential as a part of a student's education, that he be taught the practical application, in the field and laboratory, of the principles he studies in the class room; and manual labor is also necessary for the preservation of health, and the maintenance of the habits of industry. An incidental, but not unimportant result of the operation of these principles is a reduction of the cost of tuition by the value of the labor, so that the college can take students at a very low rate of admission.

All students, without regard to pecuniary circumstances, are therefore obliged to perform manual labor as an essential part of the college education and discipline and training. In these respects

consists a most essential difference between the idea associated with manual labor and that of all other attempts made heretofore to combine manual labor with study. Instead of the idea of poverty and want being associated with those who labor, that of laziness and worthlessness is associated with those who refuse to work efficiently; and the experience of established institutions has already most assuredly shown, that no young man, of whom there is any hope for future usefulness in life, is insensible to the disgrace which thus attaches to the lazy, who will work only as they are watched, and cheat their fellow students by refusing to do their share of the labor assigned them; and nothing is more conclusively settled than that those students who are the most studious and industrious in class, work the most efficiently and are the most trustworthy in the performance of their daily work.

3d. As an *Experimental Institution*, our college has an unbounded field for labor. The principles of Agricultural Science, which shall ultimately constitute the subject of instruction in its classrooms, will be a prominent and important branch of it. The development of no other department will yield richer and more lasting results, or confer more substantial benefit upon agricultural practice than this. Much time, however, is required to make thorough and reliable experiments—they will not pay at once; as well might the farmer expect to reap his crop the day he sows his grain.—They will, however, ultimately pay a thousand fold, as have the practical application of the sciences of electricity, heat and optics, in the present day, paid for the half century of apparently unpractical, purely scientific investigations that led to the results now obtained through them.

GENERAL WHEAT AND CORN CULTURE.

Notwithstanding the fact that the culture of wheat in our State is not a crop which generally pays the producers as well as either of the staple crops, it is one, when considered in the aggregate, of great importance to our people, yet its production, beyond a mere supply sufficient for home demand, except in a few favored districts where cheap transportation can be obtained, should have more consideration than is generally given to it. Those who depend on wheat as the main crop, and those who neglect its cultivation altogether, are perhaps equally out of the way. The extraordinary crops which are common some seasons, and others equally extraordinary, at occasional places, to be found every season, seem to make it plain that the difficulty lies not in the soil nor the climate, but in the generally defective and imperfect manner and method of cultivation.

Requisites to a good yield of Corn.—Of all other crops grown by the farmers of Iowa, the production of a fair crop of corn is generally best understood. Still there is no other secret about it but good seed and clean and careful cultivation. The best crops of corn are raised in something like the following manner:

1st. The ground is plowed deeply in the fall, if the previous crop was other than corn.

2d. It is thoroughly harrowed, if the season is dry.

3d. If plowed in the fall mark off shallow in the spring, thereby preventing the weeds which may be covered in the fall from springing up in the hill.

4th, Carefully selected seed is dropped and covered.

5th. It is rolled after planting, to give the best chances for germinating.

6th. It is harrowed just as the corn is coming up, that being the first assault upon the weeds.

7th. It is plowed out one way.

8th. It is plowed out the opposite way.

9th. It is plowed out a second time the first way.

10th. It is plowed out a second time the second way, and the corn, even and completely, to the exclusion of everything, takes full, and we may say magnificent possession of the ground.

A crop with such or similar cultivation, suited to the soil and the season, is harvested in time to be out of reach of any ordinary frosts, yielding from 60 to 75 bushels per acre. The corn crop has been the foundation, and will long continue to be the foundation of three-fourths of all the agricultural prosperity of our State.

SORGO AND IMPHEE.

The first official report we have of the growth of Sorgo and Imphee, and its manufacture into sirup and sugar in the State is obtained from the State census for 1853. Its introduction into the State was through the U. S. Patent Office in the year 1856 and 1857, and proved at once a success, so much so that in 1862 it occupied over 36,000 acres. It probably reached that amount in 1861. From the State censuses and that of the United States, we have as follows:

In 1858 were	5,606 acres,	product,	416,774 galls.
" 1859 "	26,846 "	" "	1,993,774 "
" 1862 "	36,667 "	" "	3,012,396 "

The product of sugar was, 21,469 lbs.

The average product per acre of sorgo and imphee sirup is near seventy-eight and a half gallons.

It is unfortunate that the information was not obtained of the number of acres worked up to produce the amount of sirup reported, as it is a notorious fact that on an average at least one-third of the cane grown was not made into sirup, owing to want of facilities for grinding and evaporating. It is also an admitted fact that the crude machinery used did not extract more than two-thirds of the juice. Deducting the one-third as not worked up, would make an average of 117 gallons per acre, as the most profitable yield of sirup. If appropriate machinery had been used, one hundred and fifty gallons per acre would have been produced.

The yield of 1863 was cut off at least three-fourths by frost, and most of the syrup made was of a quality inferior to that of the previous year, the cane being injured by frost.

The aggregate yield in Iowa in 1859 was nearly one-third of the whole product of the United States, and exceeding either of the States of Illinois, Indiana, Ohio and Missouri, more than 1,000,000 gallons. These four States produced not quite one-half of the whole crop, and the highest, Indiana, was 827,777 gallons; the lowest, Ohio, 707,416 gallons. In all the subsequent years Iowa has continued in the lead, so far as we can learn from reliable sources. Notwithstanding the very general failure last year, our farmers generally are not discouraged, and we should not be surprised that we would have a yield exceeding that of any previous year, if well ripened and pure seed can be obtained. In quality the sirup from sorgo made in

Iowa is generally of superior quality, and goes largely towards supplying the wants of a large portion of our farmers' families. The crop is as sure as that of corn. The average cost of cultivation and working into sirup does not exceed 20 cts. a gallon, when properly prepared for making it.

There has nothing been developed within the past year which can be relied upon in regard to any great improvement in the manufacture of sirup or sugar from sorgo or imphee, beyond what was known when the season for working commenced. Extensive and well prepared arrangements were made to test the several modes, but the early and severe frosts blasted every effort. If we have a favorable season this year we will, doubtless, have some reliable developments, although it is to be feared that general success will not be so certain owing to the great scarcity of pure and well-ripened seed.

A discovery of a process of making sugar from any sorghum molasses of fair quality, has been made by a gentleman in Nebraska Territory. His process was recently exhibited before a company of gentlemen in the Patent Office, Washington City, where it is said he made sugar from sorghum sirup, on exhibition there, in a very few minutes. The quality in appearance and taste is equal to the best Southern coffee sugar. The discoverer says the cost is very trifling, for foreign material, being only thirty cents for ten pounds of sugar. The quantity made from a gallon is not less than five pounds for table use. The process is so simple that any farmer can make his own sugar. A patent has been applied for, and will, doubtless, be granted. Another year will develop this wonderful discovery, and if successful it will create an entire revolution in sugar making of all kinds.

GRAPES AND WINE.

In 1849 Iowa is returned by U. S. census to have produced 420 gallons of wine, and in 1859, 3,706 gallons. These embraced, it is very probable, everything made called wine, and much of it from the wild grape. The State census of 1863 gives the number of gallons made from the cultivated grape only, in 1862, as 13,163 gallons, of which there was made in Des Moines county, 4,457; in Lee county, 2,882; and in Dubuque county, 1,224 gallons; being near two-thirds of the whole. From the number and extent of vineyards which only came into bearing the last year, the yield of 1863 must have been considerably more than in 1862.

Of grapes, the number of pounds reported as grown in 1862, was 284,755, which was doubtless doubled in 1863.

Grape culture in Iowa is an experiment no longer, there being many of the best varieties which withstand our low temperature in winter very well, especially the *Concord*, for which it is claimed no winter protection is necessary. There is scarcely a section of our State where the wild grape fails to produce abundantly every year, and especially is this the case on the sandy bottoms of the Missouri and Des Moines rivers, from which some very nice wines have been made for domestic use and of sufficient purity to be a valuable auxiliary to the wines used as medicine.

The report abounds in valuable information pertaining to the rural affairs of our sister State. It

can be had by addressing Gov. W. D. Willson, Secretary, Des Moines, Iowa.

Horticulture.

Alton Horticultural Society.

FRIDAY, May 6th, 1864.

The Society met pursuant to adjournment at the residence of D. E. Brown, on the Gratton road.

Present Dr. E. S. Hull, C. W. Dimmock, F. Curtis, J. Curtis, D. Williams, S. B. Johnson, H. C. Sweetser, Jas. E. Starr, A. Starr, F. Starr, N. J. Colman, E. A. Riehl, C. Merriman, W. Tucker, Mr. Holmes, Jas. Newman, H. G. McPike, besides the families of many of the members.

The minutes having been read and approved, Mr. Dimmock from the committee appointed to collect the books belonging to the Society, reported progress and was granted farther time.

A committee was appointed, consisting of Messrs. Dimmock, Starr and Riehl, to report nominations of standing committees for the year and reported as follows:

On Fruits and Synonyms—Messrs. Flagg, F. Starr, Huggins, F. Curtis and Riehl.

On Culinary Vegetables—Messrs. D. E. Brown, W. T. Miller and D. Williams.

On Trees, Flowers and Plants—J. E. Starr, S. B. Johnson, Newman, Mrs. Curtis and Miss Robbins Messrs. Sweetser, Tucker and Holmes were elected members.

The Secretary presented copies of the circular issued by the Horticultural committee of the Mississippi Valley Sanitary Fair, asking contributions. On motion of J. E. Starr it was resolved that the individual members of this Society will do all that lies within their power to contribute to the success of the Fair.

Mr. Riehl read an essay on "Home Adornment" a copy of which was requested to be put on file.

BIRDS.

In their relation to Horticulture being the regular subject for discussion. Dr. Hull said his evergreens had been lately attacked by the Sap Sucker (*Picus varius*.) He had caused specimens of this and the Hairy Woodpecker (*Picus villosus*) to be shot and ascertained that, as reported in the Transactions of the Ill. State Hort. Soc. for 1861, the Sap Sucker is a bird with his short gouge shaped tongue fitted for feeding upon the inner bark and cambium of trees, whilst the Hairy Woodpecker has a long slender barbed tongue for the extraction of insects. The latter bird should be preserved the Sap Sucker destroyed; but as there is a good deal of resemblance between the two care should be taken to distinguish them.

The Baltimore Oriole he found the greatest rogue in the country for early grapes. He is a sly fellow, slipping through the vines when he sees you and eluding observation. The Jay and Woodpeckers are destructive to fruit especially cherries.

Mr. Brown called the attention of members to a report on Birds by a committee of the French Senate, a transaction of which appears in the *N. Y. Weekly Tribune* of April 2d, whereby it appears

that the destruction of birds in France has been succeeded by such an increase of injurious insects as to very seriously injure the forest trees, field crops and fruits of that empire and to call for the interposition of government to restore the winged destroyer of insects. The paper was filed for future use.

GRAPE VINES AND GRAPES.

Dr. Hull introduced specimens of canes, and illustrated his mode of pruning. There are two kinds of buds. The former appear as a very general rule only on last years wood, of which, when we come to prune, there should be three canes. Two of these should be cut down to two eyes each. The remaining cane which is to bear fruit, should have say 12 buds left upon it, and each of these buds should be permitted to mature about three bunches of fruit, making about 12 pounds to the vine, formed by the renewal system, and trained to a stake.

The Doctor objects to the training to horizontal bars, because the upper buds then have much the most vigor, a tendency which can be checked in stake training by twisting the vine around a stake, whereby the fruit buds from top to bottom can be made of equal vigor.

Does not pinch in the laterals of the canes for next year's fruit; and this spring finds good buds on such laterals where the main cane has none.

Mr. McPike has found the Diana harder than the Catawba. With Mr. Dimmock it is dead. Delaware and Clinton quite hardy with Dr. Hull. J. E. Starr has the Rebecca and Herbemont most injured. N. J. Colman finds Hartford Prolific, Clinton, and Taylor's Bullit in best condition.

Dr. Hull thought he would have nearly a full crop. F. Starr, having pruned last fall, no crop. Mr. Newman a full crop on Clinton, and a half crop on Delaware.

PROSPECTS FOR OTHER FRUITS.

Of pears Mr. Colman expects a full crop on as do also Newman, F. Starr and Hull, Curtis a half crop, and Mr. Dimmock very few.

Of apples Mr. Colman says the promise is extraordinary; Merriman very promising; Curtis finds Newton Pippin ready to bear in its ordinarily resting year; Brown an ordinary crop; Hull and J. E. Starr full crops.

Of peaches there is no promise from any one of the members. The destruction has been, as nearly as may be thorough.—Orchards are reported in bloom in Jackson county on the river, and there are reports of living buds at St. Joseph, Michigan.

CONDITION OF PEACH TREES.

Dr. Hull apprehends no danger so long as the bark does not separate from the wood. Mr. Dimmock has had two late Crawford's killed, between which an Early Crawford is left unhurt. McPike has an Early Crawford on a southern slope badly killed. Mr. Colman believes trees have passed through the winter of 1855 6, will be finished by the last. A gentleman of his acquaintance in 1856 pruned one orchard in February, and the other in May, and the latter succeeded much the best. Hence would prune the winter-injured peach in full leaf. Dr. Hull finds the Large Early York and George the IV among the hardiest trees. Colman

called attention to the fact that there were plenty of seedling peaches in 1856. J. E. Starr has lost seedling trees as much or more than any this year. Early Tillotson the most injured of any budded variety. Colman thinks that large blossoms on the peach are less liable to injury than others. Riehl has noticed, however, that the Heath, a hardy peach, has small blossoms; but this may be owing to its earliness. Hull believed the preservation due to carbonic acid gas in the flower. Had seen peaches in bloom endure a cold of 8° above zero.

CLOVER IN ORCHARDS.

Was briefly discussed. Colman believes in sowing clover five or six years after the trees are planted and fairly established, and that is Dr. Warder's view; but John J. Thomas is strongly against it. Merriman has found clover a great protection from bruising to the falling fruit.

FRUIT, &C., ON EXHIBITION.

The fruit committee reported on exhibition a specimen of Catawba wine, from F. Dames, of Wellsburg, St. Charles county, Mo; considered very fine; a bright red, medium sized, sweetish apple, of good quality, presented by S. B. Johnson, for name; not recognized. Pryor's Red and Gilpin, presented by W. C. Flagg; the former past its season, but still palatable.

TO FRIGHTEN BIRDS FROM CHERRIES.

Mr. McPike says suspend a horizontal cross of wood in the centre of the tree by white twine leading from the top of the tree exteriorly to the ends of the cross. No bird will risk his person inside.

The Standing Committees were increased by appointing one on Entomology, consisting of F. Starr, Huggins, Riehl, F. Curtis and Flagg, and one on Ornithology, consisting of Colman, Johnson, Bowman, Schweppe and Dimmock.

The Secretary was instructed to procure a microscope for the use of the Society.

Mr. Newman having called attention to the fact that the meetings were becoming too large for all to profitably engage in the discussions, the committee on Tree Plants and Flowers were instructed to inquire into the expediency of holding a floral exhibition at the next meeting and to solicit the aid of the ladies of the Society in carrying out any plan that may be decided upon. The committee having consulted together reported that such exhibition would be held. The President exhorted all members to bring in specimens of flowers and early fruits:

Mr. Newman was appointed the Essayist for June.

Adjourned, to meet at Jas. E. Starr's, on *Friday June 3rd*, at 10 o'clock A. M. An effort will be made to charter a small steamboat, which will make the trip from Alton to Mr. Starr's and back, touching perhaps at one point near Dr. Hull's.

The elegant collation provided by the hospitality of Mrs. Brown, was then discussed in committee of the whole with singular unanimity and satisfaction. All appeared to be animated by a common impulse; and the previous feast of reason did not seem to at all blunt the carnal appetite of any.

A portion of the afternoon was spent in the inspection of the garden orchard and fields of Mr. Brown. His farm consists of seventy-eight acres,

very handsomely located on either side of Grafton road; and this provided with comfortable and appropriate buildings. Of fruit he has 11,000 apple trees; about 2,000 peach and 100 pear, with some grapes; and between two and three acres of strawberries. Last year he sold from about quarter of an acre, \$200 worth of Wilson's Albany. Use no manure for them unless it be ashes, and plant generally in the fresh sod. He does not worm his peach trees, but finds that a concavity about the trunk—which will be filled up by the summer showers—will keep out the borer.

Mr. Brow has still on hand 4,000 pounds of tobacco—the product of 1863—and the present year is starting the tomatoes in great quantity; and is reckoned one of the most successful growers of vegetables in the region.

Our readers who are interested in fruit culture, will always find something of practical utility in the report of the above society.

These fruit growers are none of the silk glove kind but practical men who follow this calling as a regular business and of course the dollars are not lost sight of. The immense amount of the small fruits, as well as large, that go out from the orchards and gardens about Alton furnish proof of their success.

From such men we can well afford to take lessons.

The article on Birds alluded to is too long for our space or we should give it an insertion.—Ed.

Miscellaneous.

How can Farming be made more Attractive?

The following are some of the scraps and shreds, drawn at various times from the discussions of the Wapping (Mass.) Farmers' Club:

1. By less hard work. Farmers often undertake more than they can do well, and consequently work too early and too late.

2. By more system. The farmers should have a time to begin and stop labor. They should put more mind and machinery into their work. They should theorize as well as practice, and let both go together. Farming is healthy, moral and respectable; in the long run it may be made profitable.—The farmers should keep good stock and out of debt. The farm is the best place to begin and end life, and hence so many in the cities and professional life covet a rural home.

3. By taking care of health. Farmers have a healthy variety of exercise, but too often neglect cleanliness, omit bathing, eat irregularly and hurriedly, sleep in ill ventilated apartments, and expose themselves to cold. Nine-tenths of the human diseases arise from colds or intemperance.—Frequent bathing is profitable, so is fresh air, deliberation at the dinner table and rest after a meal.

4. By adorning the home. Nothing is lost by a pleasant home. Books, papers, pictures, music

and reading should all be brought to bear upon the indoor family entertainment; and neatness, order, comfort, shrubbery, flowers and fruit should harmonize all without. Home should be a sanctuary so happy and holy that children will love it, women delight in it, manhood crave it and old age enjoy it. There would be less desertions of old homesteads if pains were taken to make them agreeable. Ease, order, health and beauty are compatible with farm life and were ordained to go with it.

Improvements in Flour Grinding.

One of the great obstacles in the way of grinding flour rapidly in an ordinary mill, arises from the liability to heat. An English inventor, Mr. Bovill, some time ago contrived an air blast which overcame this difficulty, by keeping a cool current in constant circulation upon and between the mill-stones; and in a late lawsuit against the proprietors of one of the largest steam mills in London or, indeed in the world, for infringement of his patent, some facts came out as to the value of the invention that are worthy of note. It was shown in evidence, for example, that in grinding flour, the saving of time was 70 per cent., of coal 51 per cent., and an increase of flour of 2½ per cent; the profit on manufacture was £8 17s. 3d., on produce £2 0s. 2d., on 400 bushels of wheat. In 1851 an experiment was made at the government Victualing Yard, Deptford, on 67,200 bushels of wheat, which were ground into biscuit meal. On this amount, the saving in manufacture would have been £975 9s., and an increase in the value of produce to the amount of £106 15s. This saving arises from the following reasons: 1st, speed in grinding, by which double and treble the quantity of wheat may be passed through the stones without danger of heating or "doughing them up" as it is termed; 2d, an increased quantity and improved quality of meal; 3d, immediate facility for dressing the meal without the necessity of being kept a length of time to cool and recover from the fermentation occasioned by its heating; 4th, the preservation of the mill-stones, which will grind four times the quantity of wheat before it will be necessary to dress them, because being kept constantly cool, they never get clogged by particles of flour in a damp state, and thus are always clear, and have a sharp edge; 5th, freedom from dust, which constantly flies about the mill on the old system, this being by Mr. Bovill's blast and exhaust drawn from the stones and conveyed to the appropriate chamber, where it becomes available, instead of being lost or mixed with the sweepings. For the right of using this invention, the English government have paid Mr. Bovill 1½ cents a bushel on the wheat ground in all her Majesty's dock yards, until lately when the rate was reduced to one cent per bushel in consideration of a very large increase in the amount ground.

We suppose we may notice among agricultural items more properly than any where else the marriage of Mr. James Hogg and Miss Ella Beane, in Rushville, recently. Pork and beans, says the Vevay Reveille, is a natural union, but it thinks the allowance of a single bean to a hog a small one.

Cirsium arvense—Canada Thistle.

This is sometimes called the "cursed thistle"—and very properly, too. It is certainly a curse and accursed! But we do not suppose it is so called because "cursed" is synonymous with *Canada*! We would not be so understood. But there is no sort of doubt but *Canada* is cursed with it, as well as some of the United States.

We trust they may long remain without seeing it in their neighborhoods. But the seed has wings. It is migratory. It travels in the air, in crockery crates, on railway trains, in emigrant wagons, in dry goods boxes, in tree packages, with grass seed, grain, and it is not altogether impossible that the government may distribute it through its Agricultural Department—as it did the ox-eye daisy a few years since—as a rare flowering plant! There are a thousand ways in which it may get a foot-hold on virgin soil. And if it once puts its foot in it, long continued and active effort, alone, will eradicate it. For if defoliated it does not die. Its root-stock is perennial and extends through the earth in all directions, sending up branches to the surface which quickly develop into plants. The only way we know of getting rid of it is to summer fallow the land in which it makes its appearance, plowing it when dry, (and harrowing it at once,) repeatedly, taking care that no green things remains on it. If it appears in grass lands, it is well to cut it in August, when it is in bloom and the stalks are hollow, before it seeds. The cutting must be frequent so as to destroy all the seed panicles. But this will not prevent the extension of the roots, nor them from pushing their branches to the surface. There is little doubt that if defoliation is continued one season, and is complete, the roots will die; but this will require an amount of vigilance rarely developed against any weed.

In some States there are laws compelling the extermination of this weed, or levying a heavy fine for neglect. Such a law should be enforced. In the Western States, especially, where this thistle is comparatively unknown, each individual farmer is interested in its enforcement.

This is not indigenous to the prairies. But it is getting firm foot-hold in some localities, and is only treated with toleration because farmers do not know its villainous character.

Canada is waking up to the evil effects of this weed which is too much honored by its name. A bill has been introduced into the Provincial Parliament "to prevent the spreading of Canada thistles in Upper Canada." The first section of this bill makes it the duty of every owner, possessor, or occupant of land, to cut, or cause to be cut down, all Canada thistles growing thereon so often each year as to prevent them going to seed. If he fail to do this so as to prevent the spread of the seed, a fine of \$10 for each offense is imposed. Section second makes it the duty of the Overseers of Highways to cut, or cause to be cut down, all of these pests that may be found in the highway in their respective districts, and to notify land-holders or owners in his district on whose lands these thistles may be found growing. If the land holders neglects to cut them down within five days after the service of the notice, it is made the duty of the Overseers to do it. And he need give no notice to the owners of non-resident lands.

Sections three, four and seven provide for the

compensation of the Overseers, for this work, and punishment of delinquents.

Section five provides that any person who shall knowingly vend any grass or other seed among which there is any seed of the Canada thistle, shall be liable to a fine of ten dollars for every such offense. Section six imposes a fine of \$20 upon the Overseer who neglects or refuses to discharge the duties imposed upon him by this act.

The *Canada Farmer*, discussing the merits of this bill says:—"The most serious consequences threaten some of the most valuable sections of the country unless something effectual is done in the direction of the proposed enactment. * * * * From the nature of the plant in question, effective measures must of necessity, be simultaneous. The seeds of the Canada thistle are so light and downy that the winds readily convey them great distances. Nine-tenths of the farmers of a given locality may be vigilant and active in their eradication, but if their neighbor is negligent they labor in vain. * *

* Our lines of railway are in danger of becoming, to a large extent, seed-beds for this weed. In various localities each side the track is one dense mass of Canada thistles. The value of farm property is beginning to be affected in some localities by the existence of this pest and we know of neglected domains that are quite unsaleable because so overrun with this weed."

All that our Canada contemporary says of this weed is true; and what he says of the measures which should be adopted in Canada to prevent its extension, applies with equal force in the States. Indeed the States east and west have no small interest in the passage of this Canada bill; for travel and traffic through Canada, each way, contribute to scatter the seed grown along its thoroughfares, on our own soils. We do not propose to let our readers forget this thistle during the coming season.—*Rural N. Yorker*.

We say nip the evil in the bud. After a sojourn in the west of twenty-eight years, we still retain vivid impressions in regard to this "cussed thistle," and say to it avaunt, we cant nor won't have you on our farm, hence we copy the above, which is pretty exhaustive on the subject. Our friend Bragden knows whereof he speaks on this subject having been brought up just over the border.—Ed.

[From Country Gentleman and Cultivator.]

The Curculio and the Pea Bug.

On what does the curculio feed? I have seen him perforating the plum leaf on the under side, leaving a hole of the size of a small pin, entirely through the leaf. Perhaps the sprinkling of lime on plum tree leaves renders them distasteful to the Turk.

I have noticed various acts of the Curculio—making his mark, putting in the egg—rising from the sheet, on which he had tumbled, to the height of 5 or 6 ft., and flying off in a bee-line one hundred feet or more. The idea that he cannot rise to the branches of a tree from the ground, appears to me a great mistake.

Shaking and Jarring.—What sort of feet have these insects? One day I had a curculio in a com-

mon insect glass for observation. At length he fixed himself on the perpendicular side of the instrument, and no shaking or jarring would bring him down. This may illustrate the necessity of a sudden jar, taking the creature off his guard; while a shake only gives him notice to cling. Will Dr. Fitch tell us whether the curculio has claw feet, like the bee, or pump feet, like the fly? If the latter, we can easily see the need of a sudden and violent blow to land him.

The greater difficulty of perforating clayey soils, is the reason given by the late Mr. Downing for the less abundant haunts of the curculio in tenacious soils, compared with soils sandy and loose. This may be true as far as it goes. Another reason has appeared to me probable. The animal is easily drowned; and soils retentive of water tend inevitably to his destruction. This may explain the statement made in respect to trees on one of the islands in a western river, the land being occasionally inundated; good fruit and no spoilers of it before maturity being the result.

PEA BUG.—Unlike the curculio, the pea bug will recover from almost any extent of drowning. I have found pretty strong and rather warm soap suds on washing days, the most effectual in quelling the pea depredator. E. S. E. PRIMUS.

Checktowaga, N. Y.

P. S.—If every one will give his observations upon this enemy of the fruit culturist—may we not hope for new modes of combat in the war against him?

Dish-washing Machine.

We knew somebody would invent a dish-washer. Assured our lady friends of it long ago—in fact told them we would invent the thing ourself if it were not produced by somebody else within a reasonable length of time. The idea of a housekeeper being required, in this enlightened age, to do penance after every meal over a pan of steaming hot soap and water, is absurd. Clean, bright, glistening crockery is very attractive, it adorns even the humblest board, but what right-minded husband or father can enjoy the sight without the painful recurrence to the fact that his wife or daughter has achieved that immaculate purity of delf through great dishwater tribulations.

A. M. & J. J. D. Bristol, Detroit, Mich., has invented and patented a *dish-washer*, which also cleans lamp chimneys, sharpens and scours knives, etc. For the benefit of our lady friends we copy the following from the Messrs. Bristol's circular, which will inform them of what is promised by the invention:

The Dish-washer accomplishes the washing of dishes in a safe, pleasant and agreeable manner, saving a great deal of disagreeable and "detested" labor. The degree of heat necessary to be given to the water to dissolve grease upon a plate, the hands cannot bear, and a dish cannot be cleansed without using very hot water. When water not hot enough is used, as is usually the case, the grease is not dissolved, being spread over the dish with the "dish-cloth." Such dishes, after washing, especially plates, can be finger-marked. In using a dish-washer there are no curning of hands in hot water, no changing of dresses and no "greasy dish-cloths." The dishes come from the machine perfectly clean, because perfectly hot water

can be used, and they are washed much better than can be possibly done by hand. They are then wiped upon a large, clean cloth, and are really clean. Knives can be sharpened very easily on the machine and scoured with very little labor.—The lamp chimneys need not be smoky and dirty—in fact the Dish-washer is a peace maker and should be in every family that can afford to have it. It is a peaceful, quiet domestic, doing its work without grumbling, never breaking any dishes, and never "falling out with the lady of the house." It is almost incredible that the Dish-washer, a little machine two feet square, should really do, in so short a time and in so perfect a manner, all that it is designed to perform; yet such is the simple fact.—*Sorgo Jour.*

Sorgo Names.

It matters little what we call a thing if the name be convenient and generally understood. If difficult to speak, no matter how correct and authoritative a name be, it will not acquire general use—it is vocally inconvenient and the vocal organs will find a substitute for it. The man who after using up the names of all the evangelists christened his fifth son *Acts of the Apostles*, we may be sure found a convenient nick-name for the unfortunate youth before long. The term, "sorgo-grower" can not be uttered without an exhausting vocal effort. All, however, recognise the necessity and propriety of using names which convey a correct idea of the object. The modifications of terms which find their way into general use, always appear by a gradual transit or change, imperceptible even to those who assist in producing them.

With reference to our northern canes, collectively, we have as yet no convenient and appropriate term by which to designate them. Sorghum is neither correct nor convenient. It is a generic name which includes a great variety of grasses, many of them, such as the millets, broom-corn, doura and others, quite unlike our cane. It includes, probably, both the Chinese and African varieties, though Mr. Wray, to maintain the superiority of the Imphees over the Chinese, claims that the latter is botanically *holcus saccharatus*. But in the absence of any other generally understood collective term we have applied the word Sorghum to all the varieties of cane cultivated in the North for sugar. For specific terms we use the word Sorgo when speaking of the Chinese and Imphee when referring to the African cane. The so-called Otaheitan we regard as an Imphee, but the presumed new variety, called by Mr. Smith, of Quincy, "Red Imphee," we have for greater distinction called "Liberian cane." It may properly belong to the Imphee family, but the term "Red Imphee" does not distinguish it sufficiently from other varieties of the same, and we therefore think best to apply the title to which its immediate origin gives it a claim, at least until it shall be located or shown to belong to the Kaffir or Imphee group.

While upon this subject, we will just say that our use of the word Sorgho minus the *h*—*Sorgo*, has subjected us to not a little railery from a few friends who accuse us of succumbing to Webster and Worcester. It is not very clear that a "bad spell" should be persisted in simply to display a defiance of such respectable lexicographers as the above named gentleman, and we do not feel humil-

iated by adopting what we consider a briefer orthography simply because they had indicated the same in advance. But it was not solely a servility to authority which caused us to make the change, it was mainly to save the time and labor of writing the letter *h* unnecessarily, perhaps a thousand times in a year, a purely monetary consideration, amounting as near as we can estimate, to about fifty cents, and as nobody is the poorer for the change, and as the word looks and sounds just as well and means the same thing and contend that we have a right to save the foresaid fifty cents. If other people are so self-sacrificing as to write unnecessary *h*'s for nothing, they are at liberty to do so.—SORGO JOURNAL.

Mutton and Wool Growing.

The consumption of mutton in North America has rapidly increased. The supply now as rarely exceeds the demand as with any other meat, and the best qualities outsell beef in the principal markets. No country is better adapted by natural, and on the whole by artificial condition to the production of wool, than the United States. Australia and South America contain the only very extensive regions of the earth now capable of competing with equal arenas of North America in the production of this great staple. The price of land in Australia is much higher than in the United States; its distance from the wool market of Europe equals nearly half the circumference of the globe; yet its exports of wool rose, between 1810 and 1862, from 157 lbs. to 68,000,000 lbs. South America is also becoming an extensive producer of this staple; there were imported into Great Britain alone, in 1861, 6,000,000 lbs. Yet South America has no natural condition of superiority over North America for sheep farming, while there are political and moral ones which undeniably are hostile to the security and permanence of so exposed a branch of industry. Apart from the question of the cheap production of wool, the experience of the most advanced agricultural nations, like England, Germany and France, goes to show that sheep are a necessity of a good general system of husbandry, on even the highest-priced lands and amidst the densest population. They afford as much food to man, in proportion to their own consumption, as any other domestic animals. They are believed to return more fertilizing matter to the soil. In addition, they alone furnish wool.—England is estimated to have 500 sheep to one square mile, while the United States proper (exclusive of territories,) has only 48.—*Mark Lane Express*.

From the Country Gentleman and Cultivator.

American Raisins.

We are making our own molasses quite satisfactorily. We are beginning to make our own sugar, wine, &c., which we have heretofore imported, and what shall hinder us from making our own raisins? and yet I am not aware that this is done to any extent. I see in a report of Col. Harasthy before the American Institute Farmers' Club, that he says they have a grape from which they have made in California, raisins equal to the best imported, but he does not say *what* that grape is. Grape-grow-

ing and wine-making are largely on the increase in America, to the great satisfaction of many, and to the equally great dissatisfaction of many others, who fear a great increase of drunkenness in a land almost deluged already with intoxicating liquors. There is no manner of doubt but grape-growing will become one of our most important industrial pursuits, and if so why should we pay 30 to 50 cts. for imported raisins? Why shall not those who wish to cultivate the grape for use while *fresh*, and who *do not* wish to make wine, use their surplus grapes for raisins, and thus have the fruit in some shape the whole year? Where is the person who does not like raisins, and where is the cook who could not use many more than she now gets to use? Of course no such grapes as the Isabella and Catawba could be made to serve this purpose, but if we can raise coarse, tough, semi-sour grapes successfully, why cannot we raise sweet ones?

We predict a great improvement in the variety of grapes for American cultivation, and that very few now cultivated will be regarded of much account 50 years hence.

We cannot but believe that grape-growing for the purpose of raisins may become a good branch of industry so soon as we have the right grape, especially adapted to the American climate.

Who will tell us anything of drying raisins, and if there is a grape, which is hardy in America, which is reasonably suited to raisins? We feel not only *generally* interested in this matter, but *personally*, on account of our conviction that Kansas is to become a great grape-growing country.

W. BECKWITH.

Olatha, Kansas, Apr. 7, 1864.

[From the Country Gentleman and Cultivator.]

Liquid Glue.

Perhaps there has enough already appeared in the Co. GENT. on the "Glue" question. I would, however, like to set myself right with your correspondent, S. E. Todd. On perusing what he wrote of dissolving glue in alcohol (see Annual Register, page 121, for this year,) I did not think he knew what he "was writing about," but, as my own attempt at the same thing had proved an entire failure, I only supposed he had fallen into an error. There is no question but what the quality of both glue and alcohol varies. I obtained mine at the hands of a respectable druggist, but was assured at the same time that glue was *not* soluble in alcohol, and perhaps nine out of ten of the same class (if the question was put to them) would make a similar reply. From what S. E. Todd says, I conclude that *good* glue will desolve in *good* alcohol under favorable circumstances, but that, as there is so little of the latter in the market that posesses the requisite strength, it would be safer to recommend some other solvent for general use. Joiners cabinet-makers, &c., use, I think, only water, and have occasion for it frequently; others, again, require it occasionally, and for such as these, good cider vinegar answers very well, as far as my experience goes, and dissolves it readily, and if kept in a warm place, it will be always ready for use. "Muriatic acid" may, perhaps, be better, but it is not always at hand. Another correspondent, T. P., page 111, Co. GENT., gives a recipe, in which nitric acid is added to glue already dissolved in warm water—this, he says, can be used cold, and enumerates its good qualities.

The pale colored, hard and solid article, possessing a brilliant fracture, is the best and most cohesive (it is stated in "Ures' Dictionary of Arts, Manufactures and Mines,") and is most suitable for joiners, cabinet makers, painters, &c., and that for use, glue should be broken into small pieces, put along with some water into a vessel, allowed to soak for some hours, and subjected to the heat of a boiling water bath, but not boiled itself. That common glue (not isinglass or fish glue) is not soluble in alcohol, but is precipitated in a white, coherent, elastic mass, when its watery solution is treated with that fluid. That concentrated sulphuric acid makes glue undergo remarkable changes, during which are produced sugar of gelatine, leucine, an animal matter, &c. That nitric acid, with the aid of heat, converts glue into malic acid, oxalic acid, a fat analogous to suet, and into tanning; so that, in this way, one piece of skin may be made to tan another—and that, when the mixture of glue and nitric acid is much evaporated, a detonation at last takes place. Strong acetic acid (it is further said) renders glue first soft and then transparent, and then dissolves it, and that, though the solution does not gelatinise, it preserves the property of gluing surfaces together when it dries.

From the authority above quoted or referred to, it would seem after all that *glue is not soluble in alcohol*, but as strong acetic acid will do it, and as this exists in good cider vinegar (which is the best of all vinegars for the table, pickling, &c.) it should always be at hand, and is easily applied. Those who intend using *nitric acid*, had better step aside when the *explosion* takes place. W. C.

[From the N. Y. Shipping List.]

Speculation and Extravagance.

The mania for speculation, facilitated by an inflated currency, is daily increasing, and the steady gains of legitimate business enterprises are coming to be considered much too slow for the times. The licence which an exemption from specie payments affords, undoubtedly stimulates to reckless extravagance, and, although money flows freely, and many departments of trade are brisk, a good many people seem to forget that their wealth will shrink to much smaller proportions when measured by a depreciated currency. All the luxuries, and most necessities of life, are constantly appreciating in value, but no inflation of prices seems to check the tendency to lavish expenditure; on the contrary, it seems rather to increase it. The taste for comforts and luxuries are the natural growth of this state of affairs, and to this growth it is difficult to set the bounds. What were the luxuries of the last generation have become the ordinary comforts of to-day, and the cost of living sumptuously a quarter of a century ago would now be scarcely adequate to meet actual necessities. When and where this mania will stop, it is impossible to conjecture. Unless we solve the issues of rebellion by speedy military successes, there is fear that the nation will be overtaken by a financial revulsion, the magnitude of which will have no parallel on this side of the Atlantic. The rebellion is rapidly assuming an aspect of finance, and by many the financial question is deemed to have the more important and inexplicable of the two. We are importing enor-

mous quantities of foreign luxuries as well as necessities, while the high prices of our leading commodities have restricted the export movement within narrow limits.

[From the Missouri Democrat, 22d.]

High-Priced Tobacco.

A tub of choice leaf tobacco weighing 230 pounds net was offered in this market yesterday, and created no little excitement on account of its superb quality. It was exhibited among the rest of to-day's break for public sale, but changed hands at private sale before the regular commenced at \$200 \textcent 100 lbs, and again in a few moments by private sale at an advance of \$10. It was then put up for bids and knocked down to Mr. Dausman, of Liggeti & Dausman, the celebrated tobacconists of this city, \$231 \textcent 100 lbs—the highest price ever paid in this or any other market of the world!

The tobacco was grown by Dr. C. W. Jeffries, of Franklin county, Missouri, and consigned to Messrs. Hardwood, Warren & Co., Commission Merchants of this city. The purchaser at \$200 was Mr. Dameron, of Nanson, Dameron & Co., and the second purchaser at \$210, was Mr. Rowland, of Shryock & Rowland, all Commission Merchants of this city.

[From the Country Gentleman and Cultivator.]

Onion Sets.

A correspondent in the COUNTRY GENTLEMAN of April 21st, wishes to be informed the proper time and method of sowing onion seed for sets, whether in drills or broadcast? The answer to the questions of "J. C." should in some degree be in reference to his location, which he does not give. The climate of New-England, and Northern States generally, is favorable to growth of the onion, and it will perfectly mature from the first season. In this section sets are much less extensively planted than in the more southern portions of the country, where the onion will not mature the first season from the seed. In the Northern States then, sets or small onions are planted for the purpose of raising "rareripe" onions, which are fit for the table some weeks before those that are grown from seed. Among the seedlings grown here, there is generally small onions sufficient for sets for the following spring.

In the more southern portions of the country, take for instance the meridian of Kentucky, and the onion requires two years to arrive at maturity. Two kinds of sets are planted by gardeners; one, the "Top-onion,"—this is the variety that produces sets or small onions on the top. These are very extensively grown about Vevay, in Indiana, for the southern market. Many thousands of bushels are annually grown and shipped from that place. In other neighborhoods the sets of the common onion are largely grown for market. In order to avoid excessive labor in weeding so small plants as the onion, the seeds are planted as early in the spring as the ground is in a proper condition to work, say the last of February or the beginning of March. The ground, of course, must be made fine and moderately rich, with manure as free from wild seeds as possible. Broad, shallow drills are then made, say twelve inches apart. In these drills

the seeds are scattered quite thick, nearly covering a space two inches in width. The drills are then lightly covered with earth. Nothing more is necessary but to keep the rows hoed out and the weeds from among the young plants, and by July the sets are ready to harvest. Being planted thick the sets are small; the smaller the better, say from the size of a pea to that of hickory-nut. The smallest sets will make full size onions the following season, and from being small no centre or seed-stalk is produced, which is detrimental to our "rareripe" onions. These sets, and the "Top onions," are generally retailed from \$2.50 to \$6 per bushel, according to the supply. The trade in them is often very large.

The inquiry may be made, why will not the onion in the rich soil of the South and West, mature in a single season from the seed? The answer is, the climate is too warm. No root crops succeed so well there as in the cooler climate of New-England and the Canadas. Hence early planting of all root crops is in dispensable to tolerable success. Onions in February, if the ground can be worked. Potatoes are also, and for the same reason, planted early, and the best crops are matured in July. The growth of all root crops is checked by the hot weather if not cut short, for want of rain, which is very common.

In the more favorable locations for the onion, the seeds for sets may be sown late, to avoid their becoming too large. Yet late sowing will increase the labor of weeding. But very thick sowing will in some measure check the weeds, and the sets will be of more desirable size. H. P. B.

How to Trap Gophers.

ED. IOWA HOMESTEAD:—You wished to know how I trap gophers. Take a small steel trap (such as is used to catch mink,) and close to where they have been throwing up fresh dirt, dig down until coming to their hole, (you may have to dig four or five times before finding it,) and then dig down until the top of the trap will be even with the bottom of the hole. Sprinkle fine dirt lightly over the trap, then take one or two short boards, six or eight inches wide, and lean them over the trap so as to let the top edge of the boards come just above the hole; then cover it all up closely with fine dirt, and when the gentleman takes his next round, he will be apt to get his foot fast, which will be in the course of twelve or twenty-four hours. I do not use any bait.—R. D. McKee, Taylor Co, Iowa.

FARMING IN COLORADO.—Colorado cannot be recommended as an agricultural State, since crops can only be successfully grown by irrigation, which much of the land will not admit of, owing to its topography. But where it can be irrigated without too much expense, farmers succeed in obtaining crops of all kinds, particularly wheat, that pay largely. Wheat is grown on some bottom lands without irrigation. The quality of Colorado wheat is represented as superior to that grown in Illinois. The *Denver Daily News*, speaking of irrigation says:

"Proper precaution being taken, and ample preparations made for supplying his crop with water, the farmer can plant with as good an assurance of a crop in Colorado as anywhere else. Upon many farms, probably a majority of those in the territo-

ry, irrigation requires full as much labor in a series of years as the planting and cultivation of the crops in the same length of time. But when the water is taken from small streams, in which dams are not expensive, and easily kept in repair, the cost of irrigation is much less. A great deal of land, too, upon the lay of the ground. One or one farm may be very easily irrigated, while other is quite difficult. Very rolling ground, or that which is cut up into small ridges with intervening hollows, is hard to keep in good condition for the growing crop. It is true that there cannot be produced the variety that is found in some localities, nor can any one crop be made a speciality. Neither can very large farms be seen here, nor will it ever be profitable to make many such. The secret of success lies in small farms well tilled.—Upon such the profits can be made far greater than upon five or ten times the quantity of land anywhere in the Atlantic and Mississippi Valley States."

SORGO SIRUP.—Perhaps the opinion of such a man as one of the Messrs. Belcher, sugar refiners of St. Louis and Chicago, upon sorgo sirup, may encourage some who are weak in the faith about its value as a farm crop, and induce them to plant more. The *Wisconsin State Journal* gives Mr. Belcher's opinion as follows:

"Mr. Belcher said there is no trouble in making a first-rate article of golden sirup of any good, light colored sorghum, and without much diminution or expense. That from ten to fifteen cents per gallon would cover the whole cost and shrinkage, and make an article that would sell in any market of the world for a good price, and no one could tell what it was made of.

"That in the fall and winter of 1862 they refined at their Chicago refinery many thousands of gallons of sorghum sirup, and made of it an elegant article of golden sirup that easily sold in the market at good prices under various fancy names, not being understood to be sorghum sirup at all. They sold it as golden, rather than sorghum sirup, because it really was a good article, and because golden sirup had already an established reputation and sorghum had not.

"He said he had no doubt but what good sorghum sirup would be worth six shillings per gallon at wholesale next fall, in any quantity that may be offered, and that probably no country in the world would, at least for a long time, be able to produce a cheaper sirup than the rich prairies of the West.

"He thought the farmers ought to and would grow it extensively as a commercial crop just as soon as they come to realize its great value and profitableness as a farm crop, not merely for sirup, but for many other important purposes and uses to which it would be put."

FOUR PEARS.—G. W. Chase, in an article on the selection of fruits in the *Mass Ploughman*, says that if one can plant but a single pear tree, that one should be the Bartlett—if he can plant two, the second be the Duchesse d'Angouleme—if three, add the Vicar of Winkfield, and for the fourth, Dearborn's Seedling. These four pears will furnish a supply of fruit from the last of August to the first of January. This selection is for Massachusetts.

From the "Sorgo Journal."

CLYDE, Sandusky County, O.,
March 25, 1864.

EDITOR SORGO JOURNAL.—I want the Journal and inclose one dollar.

My experience in the Sorgo enterprise does not suggest, any thing worth the notice of our readers, but what has probably been frequently laid before them.

I would suggest, however, that all who are instructed in the matter, should impress upon their neighbors the importance of cutting their cane immediately after it is injured by frost, especially if the cane is not ripe. Many persons let their cane stand last year after the frost, supposing it would ripen, by which they lost their crop. Several lots were brought to my mill last year that were most disgusting to the taste and smell, and utterly worthless.

The seed of cane when green or soft is easily injured by frost, even when the effect of the frost is scarcely perceptible on the leaves of the stalk; and when the seed is so injured as not to receive the juice which forms the seed, that juice lodges in the stalk, in the upper part of it first, and immediately commences the ruin of the stalk, as that juice is entirely separate from the saccharine and is of itself very insipid and disgusting to the taste. If the cane is cut up immediately it stops the flow of this juice and the cane is as good as if cut without the frost; if housed, or put in piles of half a wagon load in a place, and covered with leaves, it may be kept for weeks without injury. I keep my cane from four to six weeks after cutting.

In 1861 I planted several different patches of cane at different times, from the 3d of April to the 12th of June. The first plantings were twenty days coming up. The best cane was planted about the 9th of May. That planted on the 12th of June got ripe.

In 1862, I planted a patch of cane on the 13th of May. At the same time I transplanted cane that was an inch high, by the side of that just planted. The transplanted cane was no earlier than the other and of an inferior quality, a large portion of the stalks having from one to four branches and as many heads.

I have found no advantage in soaking the seed.

Different kinds of boilers are used in this vicinity, and all made to do excellent work, if used by an experienced operator. Most men, I find, are best pleased with that kind which they are most used to. The idea that the peculiar construction of the evaporator or boiler will insure granulation, is, I think, an error. I have known granulation to occur readily in sirups made on all the different kinds of boilers used in this vicinity. Cane grown on some soils will readily granulate more or less if properly handled, while that grown on other soils will not granulate by any ordinary process.

The pan that I use I think is the best I have ever seen; it is $3\frac{1}{2}$ feet wide, $9\frac{1}{2}$ feet long, but it should be 11 feet long. Over the fire is a division three feet long into which the juice runs continually, and in which most of the skimming is done; a valve at one corner admits the juice to the other parts of the pan; at the opposite end is another similar division, with a damper or apron under it to shut the fire off at any time. In this division I finish sirup continually, from three to four gallons

at a time. I dip the juice into this division with a dipper; the juice becomes quite sweet by the time it works to this end of the pan. I aim to boil about two and a half inches in depth of juice, so that the juice is not kept upon the pan but a short time.

The sheets of iron are placed cross-wise of the pan; I use those two feet wide. Two inches of each edge of these sheets are turned up, riveted at the upper edge and soldered. These form ribs that keep the surface of the bottom level; they also remove the soldering from the fire. An inch of the end of these ribs is turned down to admit of the flow of juice.

I have no exclusive property in my pan, nor do I follow making them for sale; hence this will not be looked upon as an advertisement.

Yours, T. J. CARLETON.

Care of Young Stock.

By C. N. Bement.

Nothing is more important to the successful rearing of stock, than that the young animal should receive a good start in life, and it is idle to expect a profitable return from an animal which has been half starved and unweaned for during the first few months of its existence.

When we look into a farm yard and see the young calves cringing and shivering in the corner, their legs drawn together under them as if they were huddling together for sympathy, their long, rusty, staring, lifeless looking hair standing at right angles with the body, their paunches stuffed with coarse and unwholesome or innutritious food until they are swelled to an enormous size, their eyes dull and dreamy and listless, and the whole general appearance impressing one vividly with the idea that there is indeed such a thing as a state of semi-existence, we do not require to be told that the owner is a poor man. Such management will make any man poor in a short time.

When in a state of nature, the calves are nourished during this period almost entirely by the milk of the dams, and there can be little doubt that when the health and growth of the calf is the principal object with the breeder, it should be allowed to run with the cow. But to most farmers, the milk is of too much value to permit this, and the calves must be artificially reared. When this is done the calf should not be taken from the cow until four or five weeks old. We are aware that many breeders advise taking the calf from the cow before it is allowed to suck, urging as a reason that the calf will much more readily be taught to drink if it is never allowed to get its food in the natural way.—This may be true, but we have found very little trouble in teaching the calf to drink after it has been allowed to run with the dam two or three days, and there is a very important reason why this should be done.

The faeces that accumulate in the intestines during the latter months of the foetal state are dense and adhesive, and avoiding the excrement is at first, often attended with some difficulty. By a wise and admirable provision of nature, the first milk of the cow possesses certain laxative properties which materially assists in establishing the healthy action of the intestines, and it is very important that milk should constitute the first food of the calf.

When the calf is first taken from its mother it should be removed as far as is convenient from her, moved to a calf stable, and there receive a drink three times a day, at the same time they used to suck; in the meantime they are allowed hay.

"The first peculiarity now of my mode of feeding is this, that into the *drink of the calves* I mix a *great deal of linseed*.

"Whoever examines the the milk which forms the natural food of the calf will find that the calf receives a great deal of fatty matter in its food. Is it then justified to rob the calf at once of this constituent by skimming the milk? This was the question I asked myself in 1856; and though, or rather because I then had no knowledge of chemistry, I concluded to allow each calf a pound of linseed, in compensation for the cream withdrawn. For it must be remembered that in 1856 our scientific men set no value upon fat as a constituent of the food. Dr. Kuhn was the first to teach and prove the necessity of giving our animals an allowance of fat. I am now fully convinced that *my success is due chiefly to the mixing of fatty matter with the food*.

From the Boston Cultivator.

Cut and Uncut Potatoes.

Editors of the Cultivator :—A few years ago I tried several experiments to determine whether whole or cut potatoes would yield the best. I had planted whole potatoes, but many farmers said that cut potatoes are better. My experiments satisfied me that whole potatoes are best in all cases. I give the result of one experiment. The variety used was Jackson white.

The potatoes were carefully selected and weighed when planted, the produce dug when ripe and weighed. The manure was spread on; plaster applied in the hill, three bushels to the acre. A few rows of each kind were planted through the piece, and the calculation made for an acre of each kind.

One acre planted with large, uncut potatoes, 58 bushels to the acre, yielded at the rate of 377 bushels to the acre. One acre planted with middling sized potatoes, 29 bushels to the acre, 333 bushels. One acre planted with cut potatoes, 29 bushels to the acre, yielded 249 bushels. One acre planted with small, whole potatoes, 9 bushels to the acre, yielded 244 bushes.

If any of the subscribers of the Cultivator have tried similar experiments with different results, I should like to hear from them through its columns.

Holden, Me.

D. B. K. LOWELL.

Dairy Farming.

Since the commencement of the rebellion, sheep and wool have been on a bender. High price induced thousands to go into the sheep business to the neglect and abandonment of the dairy. The result is, as might have been expected, there is now a short supply of dairy products in the market, and probably in the country, and prices have gone up to a high figure. Some assign the cause of the present price to speculators, but however much that useless class of operators may have to answer for, we think they will be acquitted upon that charge. The fact is, the supply is not equal to the demand. This is brought about by

the cause referred to above, and other disturbing causes incident to the great drain made upon our producing population to fill the ranks of the army.

Really, the price of butter and cheese is no higher in proportion than that of most of the other prime necessities of life. But it has now reached a figure quite satisfactory for the manufacturer, and those farmers who have not exchanged their cows for sheep, will have an opportunity the coming season to demonstrate that it will pay to make butter and cheese, as well as to raise wool. Present prices may not be maintained, but there is no doubt these articles will rule high for the present.

As between butter and cheese, our impression is that the larger profit may be realized from the butter. The milk required to make a pound of butter will make something like three of cheese. What the difference may be in the expense of manufacturing, we have no means of knowing. Farmers' wives and dairy maids can tell, and we suppose they will govern themselves accordingly.—Whichever they undertake to make, they should take hold of the work understandingly and perform it thoroughly. High prices can only be obtained for good articles. Poor and indifferent qualities will go hard at any price. So that those who wish to turn their dairy products to a good account, must see to it that everything connected with their manufacture, be neat, clean and sweet. There is no sort of excuse for poor butter or poor cheese. It is the result of sheer carelessness, which is very often shifted off upon the cows. A thrifty, wide-awake, clear-headed farmer has no trouble on this score. He provides his wife with suitable rooms and implements for her calling, and she soon imbibes his spirit of enthusiasm, and cheerfully second his efforts by properly superintending them. They have sweet butter and good cheese, which always brings the highest market price, generally at their door.

Those who undertake to carry on a dairy in a careless, shiftless manner, need not be disappointed if the income from their cows does not make the prosecution of the business profitable. Bear in mind that "anything that is worth doing at all is worth doing well," and that this maxim applies with as much force to dairy farming, as to any other operation connected with a farm, or with anything else.—*N. H. Jour. of Agriculture*.

Grub in the Head.

A correspondent of the Wisconsin Farmer gives the following as a remedy for grub in the head of sheep. It is worth trying, and looks quite reasonable:

"About the first of March, make a mixture of one quart of tar, one pint of spirits of turpentine, one pint of linseed oil; simmer well, and when cool, mix two ounces of black pepper ground fine.—Make a small swab by winding tow or flax on a small, tough stick, dip it in a mixture and gently slip it up the nostril to the bridge of the nose.—Go through the flock in this manner. If on the barn floor, you will find grubs there in a little while. The turpentine, kills, the oil loosens, the pepper makes the sheep sneeze them out, tar is healing.—I never knew a sheep to die of grub in the head after being treated as above.

Preventive. Take the above mixture without the pepper, and go through ' ' flock as above in Oc-

tober, or prior to putting them into winter quarters, as it will destroy all the parasites, and the sheep will do well through the winter."

A Humbug Sugar Maker.

Eds. Prairie Farmer :

It was my fortune to fall in with a vender of a patent right, or a secret for making 10 lbs. of good dry sugar from any kind of cane sirup weighing 13 lbs. to the gallon.

This man had been experimenting in sorghum 14 years, (7 years longer than the canes have been introduced;) and about three years ago he discovered this wonderful secret, which he says he patented at that time. He accomplishes this wonderful feat in the following manner:

First he "puts the juice in this ere vessel here," then he puts in some "stuff" to settle the "heavy matters," just as simple as sand sinks to the bottom of water. Next, he "draws it off into this ere vessel here what sets under the first one," and in here he puts in some other kind of "stuff," that raises all the swimming particles. This leaves his juice perfectly clear, and ready to boil down to 13 lbs. to the gallon. When it gets cool, you must stir it with a scoop shovel to keep the sugar from settling into a solid cake like maple sugar. (Be careful not to omit the stirring up directions.)

All he asks for his secret is five dollars. For this sum he will put one in the way of making an everlasting fortune in a very short time. He stipulates that—if he should sell out any territory by the state or county, he will remember all the individual rights he sells.


Now, as I am interested in making known all the crooks and turns in the sorgho business, I thought it was my duty to give him and his secret the benefit of a special notice, and advise all persons that are so verdant as to be imposed upon by this vender of a wonderful secret, that \$5 invested and a year's careful practice, will *perhaps* do them some good. The name of this peddler is Lamphear.—Remember that the *Phear* of the bugs is the beginning of wisdom.—*Prairie Farmer*.

BALKING.—If you have balky horses, it is your fault and not that of your horses; for if they do not pull true, there is some cause for it, and if you will remove the cause, the effect will cease. When your horse balks he is excited, and does not know what you want him to do. When he gets a little excited, stop him five or ten minutes; let him become calm; go to the balky horse, pat him and speak gently to him; and as soon as he is over the excitement he will, in nine cases out of ten, pull at the word; whipping and lashing and swearing will only make the matter worse. After you have soothed him awhile, and his excitement has cooled down take him by the bits; turn him each way as far as you can; pull out the tongue; soothe him a little; unrein him; then step before the balky horse, and let the other start first; then you can take him anywhere you wish. A balky horse is always high-spirited, and starts quick; has his pull out before the other starts, by standing before him, the other starts too. By close application of this rule you can make any balky horse pull. If a horse has been badly spoiled, you should hitch him to an empty wagon, then put on a little load, and increase

it gradually, caressing as before, and in a short time you will have a good horse that will work without troubling you.—*Exchange*.

HIGH PRICES OF WOOL.—The high prices to which wool has attained, have greatly stimulated the production, especially in the more remote Western States. For the past two years large numbers of sheep have been sent from Ohio, Michigan, &c., to Iowa, Minnesota and Nebraska, where the climate and ranges are rarely excelled for sheep husbandry. The clip of 1864 will undoubtedly be largely in excess of that of any previous year, and it will all be needed at remunerative prices. The increased production of wool in California is remarkable. In 1857, the quantity shipped from that State was fifty-five bales of very inferior quality—worth from 6 to 10 cts. The clip of 1863—only six years later—was over 50,000 bales.—According to this ratio of increase, the clip of 1869 will reach 200,000 bales; and in 1875, 1,250,000. The quality and condition of California wool coming forward, is much better now than formerly and meets with increasing favor among manufacturers. Staple kinds in good order command 40 or 50 cts.

COST OF CULTIVATING LAND BY STEAM.—A Mr. Smith, of Woolston, England, has published an account of the cost of cultivating land by steam for eight years, in which he says that the cost of preparing land for roots was, with steam, \$2.88; with horses, \$10.03; for barley two years, \$2.16 with steam against \$5.05 by horse-power; four years for wheat, \$50.20 by steam against the same for horse-power, and foots up a total for a number of other articles, which show a gain of 200 per cent. in favor of steam. The writer says also that besides the economy of the plan he had much better crops.

 Buds that were inoculated last Fall should not be forgotten, but as soon as vegetation has pushed forth, the bud should be examined, and all other issues from the old stock taken away.—*Gardener's Monthly*.

TO PREVENT A HORSE FROM PULLING AT THE HALTER.—Tie a rope around the neck, put it thro' a hole in the edge of the manger, and tie it around the fore leg below the knee, and when the horse pulls, the rope will slip through the hole and pull up the fore leg, and he will soon give it up.—*Country Gentleman*.

Bagasse Burning.

The use of bagasse for fuel is beginning to attract considerable attention, and the time is not distant when in all localities remote from paper mills and other markets for this substance, it will all be utilized under the evaporating pans. This must be done without the labor and trouble of sun drying. The woody fiber of the cane is sufficient when burned and the heat properly applied to reduce all the juice to sirup. And it makes no difference, so far as the capacity of the woody matter to evaporate the juice is concerned, whether the bagasse

is pressed dry or half the juice left behind. In one case the water is to be evaporated from the surface of the pan, and in the other case, in the furnace, the amount of heat required to vaporize the water is the same in both. When the bagasse is sun dried, it of course reduces the whole quantity of water to be evaporated, leaving so much less to be done by the fuel, but if fermented, the sugar of the contained juice which is a fuel, is lost. But we do not want the trouble of sun drying. We want the bagasse to go directly from the mill to the furnace and there perform its legitimate and appropriate function of concentrating the juice which it has given us, to sirup. But this is something like requiring the cow that gives us cream to convert it into butter. To be sure it is, and why not? It is not the cow's fault that she has not done this very long ago. It is our fault that we have not asked her and made it possible for her to do it. It is possible for the cane when pressed or half pressed, to convert all the juice taken from it to sirup, and this is shown by the revelation it makes of the relative proportion of combustible and aqueous substance which it contains. It is because we refuse to avail ourselves of its capacities to serve us, that we are deprived of its services in this respect.

Some talk of its great value as a manure than as fuel. All wrong. By burning it, its useful properties as a manure are not lessened, for they all remain in the ashes, and in a much more convenient and portable form than when in tangled and cumbersome bagasse heap. Something is lost by the floating away of a portion of the light ashes from the top of the chimney but not much, we presume.

But we began this paragraph with the design of saying that Mr. Jonas M. Frink, of Coral, McHenry county, Illinois, has invented and patented a bagasse furnace, and also a pair of chopping rolls, attached to the mill for cutting up the bagasse. The bagasse furnace is placed along side and opens into the regular furnace under the pan, the latter being furnished with the ordinary door and grate bars for a supply of ordinary fuel, if needed. We do not know how the arrangement succeeds. Parties desiring information can address Mr. Frink, as above.—SORGO JOURNAL.

F. K. Phoenix And White Willows.

It will be remembered by our readers that on page 119, current Vol. of RURAL, we published a letter from Mr. PHOENIX, propounding certain queries to Mr. BRAGDON, to which replies were made categorically. At the close of our reply, we asked the following questions:—"Will Mr. PHOENIX inform the readers of the RURAL in the West, whether he employed men in the winter or spring of 1863, to cut willows at, or near, or in the region of Peoria Lake? If so, how many men did he so employ, and how long were they so employed? And will he tell us whether those were White Willows—*Salix alba*—or not? If not, what did he do with those willows?—whither did he ship them?" At last we have Mr. PHOENIX's reply which we give herewith, omitting only that portion of his letter which relates to matters already fully discussed in these columns, and having no bearing whatever on the subject in hand:

REPLY OF MR. PHOENIX.

As to the queries propounded to us—Mr. B. is welcome to the implication—we believe the first of the kind ever made against us, during nearly a quarter of a century in the tree-business at the West, no doubt with fully our share of both friends and foes. He is the only person we ever knew with any such information, and he cannot deny that such was our reply to him last fall, at the Rockford State Hort. Society Meeting. He there first named it, and though urgently requested to do so refused to give his authority. We then utterly and contemptuously scouted the story, as we do now, as false in every particular. We had no men cutting swamp willow, and have never sold a cutting but of the genuine White Willow. After the emphatic contradiction then given, and his seeming entire acquiescence we might be surprised at this publication. As it is, we only asked him to give his authority—we have a right to know the name or names of parties who so informed him, or does he publish the charges as of his own knowledge?

F. K. PHOENIX.

Now, in the outset, it is proper that the reader should understand that our—Mr. BRAGDON's relations to Mr. PHOENIX have always been pleasant and fraternal—that asking the above questions was not the result of any desire to injure him or his business. And we shall be glad if his reputation for business integrity comes out of this trial unsullied. We confess to having written one reply to Mr. PHOENIX's former article, in rather an *angular* manner, because it seemed evident, either that he did not know what he was talking about, or that he was making an effort to place us in a false position, for the purpose of advertising himself and his willows; and our complacency was not increased by the suspicion, to say the least, that he had cut and sold swamp willows, extensively, as the White Willow. What the grounds for that "suspicion" are we shall now gratify Mr. PHOENIX by disclosing.

Some time last August or September we were informed by two prominent members of the Illinois Horticultural Society, that Mr. PHOENIX had employed, the previous spring, twenty men, more or less, a number of days or weeks, (we think weeks,) in the vicinity of *Pure* Lake, cutting and shipping willows. These members professed to have received their information from a railroad man over whose road these willows have been shipped,—and who objected to having his name used because Mr. PHOENIX paid the said road a heavy freight tariff. We stated to the parties that if this report was true, and it was true that Mr. PHOENIX was distributing these cuttings for WHITE WILLOWS, it would be our duty to let the public know it; and we urged that further inquiry be made so that the facts, whatever they might be, could be established.

Meantime we met Mr. P. at Rockford, and told him what we had heard, and asked him if it was true. He asked, without replying, "Where is 'Pure' Lake?" We did not know, and told him so. He replied, "It is a foolish and a malicious falsehood." We think he asked us for the names of our informants, but we declined giving them, preferring to investigate further. Subsequently, we learned that we had misunderstood the name of the locality where this work was said to have been done—that instead of 'Pure,' it was Peoria Lake; so that Mr.

PHENIX's denial might have been valid, and yet not have affected the fact.

We were called East, but while in the East wrote to the parties, or one of them, urging further investigation, and asking them to report such facts as might be obtained. We heard nothing from them, but late in the season had an interview with one of the gentlemen who had no report to make calculated to remove this "suspicion;" on the contrary, statements then made to us, by men whom we do not believe would assail the character of Mr. PHENIX, nor any other man, wantonly, confirmed that "suspicion." And it has not been removed, although we have no knowledge of our own tending to establish it. Thus the matter has remained until Mr. PHENIX's recent letter decided us to do what might be done to solve the problem. We give the names of the parties who furnished us with the information, and they can, doubtless, furnish the name of the author of the story. This is certainly due Mr. PHENIX, if, as he asserts and we hope, he is innocent. It is also due the public that the facts should be stated—for they relate directly to the public as a party interested. The names of our informants are O. B. GALUSHA, Lisbon, Ill., and S. G. MINKLER, Specie Grove, Ill., both, we believe, personal friends of Mr. PHENIX. No one, that we are aware of, has pursued this matter with any personal ill-feeling whatever—certainly we have not.

White Willows, again.

EDS. RURAL NEW YORKER:—I have been reading your Western Editor's remarks, at various times, about the Gray, or White Willow. May I ask if he has ever examined the many plantations of it during his travels in Northern Illinois, certainly within a few hours' ride of Chicago, by rail, any day he chose to go out for that purpose. If he had done so, and then deliberately concluded that it is a humbug, he is the first and only person I know or have heard of, out of many hundreds who have visited them, that has come to such a conclusion.

How any true friend of the West, knowing the destitution of trees on the prairies, can persistently oppose any general effort making to remedy that great want, is more than I can understand. But for the severe drouth the past spring, I am confident he would soon see and acknowledge his mistake. This I assert apart from all incidentals as to high prices, quality or genuineness of cuttings, &c.,—that here was in itself a meritorious effort to start general tree planting on the prairies, and with the most hardy, enduring, valuable, soft-wooded tree, of easy propagation, general adaptation, availability and usefulness known for our prairies, and that Mr. BRAGDON, against every other man I know of at the West acquainted with the subject, opposed, cried down the effort *per se*. I must beg to renew my query:—Has Mr. BRAGDON examined the growing plantations of the willow thoroughly? If not, let him do so. If he has, then it is his judgment against that of hundreds of other, perhaps equally competent, judges.

Truly,
Bloomington, Ill., 1864. F. K. PHENIX.

REMARKS BY MR. BRAGDON.

1. Mr. PHENIX has read the Western editor's remarks very carelessly, judging by the above communication.

2. Mr. BRAGDON has visited the White Willow plantations of Northern Illinois. But he did not visit them in the pay of any White Willow speculator, nor nurseryman, nor pedler; nor were his expenses paid by any such person, which cannot be said of certain other contemporaries which he might name, and which he will take occasion to name at the proper time.

3. Mr. BRAGDON has not concluded nor asserted that the White Willow is a humbug. And it is highly probable that Mr. PHENIX knew he had not when he penned the above specimen of special pleading. But he has denounced, and intends to denounce, regardless of the interests of Willow dealers, all efforts made to humbug farmers with this White Willow or by means of it, any other Willow.

4. Mr. BRAGDON has never opposed any "general effort," made legitimately, to remedy the great want of trees on the prairies. But he has opposed, and intends to oppose, the effort which has been made and is making to take money out of the pockets of the farmers of the prairies by false pretenses. He has no objection to farmers planting the White Willow. But he is determined they shall plant it for what it is, so far as he can influence them, not for what it is not. And he is firmly convinced that the rascalities which have grown out of this White Willow excitement, have done, and will do, more to retard the progress of tree-planting on the prairies, than any thing which has happened during the past ten years.

5. It is not true—and Mr. PHENIX must be willfully ignorant in the matter—that "Mr. BRAGDON, against every other man I know of acquainted with the subject, cried down the effort *per se*." It is true that Mr. B. was one of the first to commend this White Willow as a timber tree. And it is true that he has said it is not a hedge plant, according to the common acceptance of that term; and he continues so to assert, very much against the wishes of those who have cuttings to sell. And he has, and does still doubt that it will be durable as a stockade. And he has not been alone in these positions and opinions. There are men whose names are quite as well known in the West as Mr. PHENIX's, or any other White Willow dealer, and whose judgements will be quite as likely to be unbiased by self-interest, who occupy the same position, and repeatedly expressed similar opinions concerning this White Willow, to those held and expressed by Mr. BRAGDON. In order to enlighten Mr. PHENIX it may be well to name a few whom he will probably recognize. First the late lamented Dr. JOHN A. KENNICOTT, who has had this wonderful willow growing on his premises many years. ARTHUR BRYANT, Sen., of Princeton, whose judgment and knowledge in such matters is not second to that of any other man in Illinois. Prof. JOHN B. TURNER, of Jacksonville, (see his article in present Vol. of RURAL, page 39,) who has had a great deal more experience with this willow, for fencing purposes than Mr. PHENIX, as the latter will doubtless concede. SMILEY SHEPHERD, of Hennepin—as honest and true a man as Illinois can produce, and a practical, scientific horticulturist, withal. A. R. WHITNEY, of Franklin Grove, who knows all about this willow and the willow plantations to which Mr. P. refers. LEWIS ELLSWORTH, of Naperville, whose letters of protest against the indorsement of

this willow for fence-making purposes by the State Horticultural Society, are on file in the Secretary's office probably. ROBERT DOUGLAS, of Waukegan, who has no superior in North Illinois as a well informed horticulturist. And yet Mr. BRAGDON is alone!

6. Again in answer to Mr. PHENIX's renewed query at the close of his article, he has seen and examined the White Willow plantations of Northern Illinois thoroughly, and that said examination did not suggest the changing of a single word he has written concerning this willow. And, further, Mr. B. has no motive nor interest, nor has he had any, in his course with reference to this willow, which did not grow out of his convictions of duty to those whom his writings might influence. *He has been offered a great deal more money to pursue a different course to that which he has pursued!* The trouble is with Mr. P., probably, as we know it to be with other willow dealers we might name, that it is not found an easy matter to sell willow cuttings to a RURAL reader, without some guarantee that they are genuine White Willow cuttings. And it is found difficult to make a RURAL reader believe all that their agents choose to assert concerning this wonderful willow. And it is found that too many farmers take and read the RURAL! This is precisely what is the matter, and it will continue to trouble the venders of willow some time yet, probably.

7. Having answered Mr. PHENIX's questions fully and faithfully, Mr. BRAGDON wishes to ask a few. Will Mr. PHENIX inform the readers of the RURAL in the West, whether he employed men, in the winter or spring of 1863, to cut willows at, or near, or in the region of Peoria Lake? If so, how many men did he so employ, and how long were they so employed? And will he tell us whether those were White Willows—*Salix alba*—or not? If not, what did he do with those willows?—whither did he ship them?

Perhaps Mr. PHENIX will call these impertinent questions. Perhaps he will refuse to answer them on that account. If so, we may, probably, be induced to give our reasons for asking them. And we may ask others.—*Rural N. Yorker.*

We give up a large amount of space to the above. We look upon this question in all its aspects with no small amount of interest. Mr. PHENIX will thank us for an opportunity to set himself right in the matter which we hope he will be able to do. We are satisfied that a large amount of swamp willow has been sold, and all parties trying to sell again have been liable to the imposition. If Mr. P. has been dealing in that way it is possible that he may have made some bad purchases in this way without his knowing it. We gave an account of a swindle attempted here with the head nominally located at Carbondale. Since then our letter addressed to the reputed parties at that point has been returned from the Dead Letter Office, which indicates where the swindle was located.

We have more faith in the willow than our friend BRAGDON, but agree with him that as a hedge plant it is of little value but for live fence in our low land

when shelter is also an object it is highly valuable.

MESSRS. BRYANT and others do not deny that it will make a fence but that it will not be found durable for that purpose, all of which may prove true.

The Controversy between P & B. we trust will prove valuable as both wield ready pens—and both have pluck. It is the truth that we want, and we are disposed to give our readers both sides.

Influence of Climate on Plants.

Indian corn, or maize, was first found in the West Indies, by Columbus. There it grows thirty feet in height, and each stock, (or tree, as Grant Thorburn would call it,) contains only a single ear, that produces only a few soft kernels on a spongy butt, which is used only for rough fodder. Proceeding northward, in Alabama it reaches fifteen feet, and there yields thirty bushels to the acre. Advancing still further this way, in Kentucky and Ohio, it produces fifty bushels to the acre; but here in New England and in Maine, where it only attains eight feet in height, agricultural societies have not unfrequently awarded premiums for 100, and even in remarkable cases, 150 bushels to the acre. The heat of a more southern sun develops the juices of the plant too quickly; hence it runs at the South into stalks and blades, to the neglect of the seeds or grain, and dries up before fructification becomes complete. Hence here, in its most northern limit of success, we can raise large crops per acre, and secure a heavier and more valuable gain than in States further south.

Wheat is another important cereal. Its native country is said to be the valley of the Euphrates, in Mesopotamia; but on tracing its progress northward you will find it growing more and more prolific and farinaceous, till you reach the Russian dominions on the Baltic sea, where wheat is more perfect than in any other part of Europe or Asia.—Wheat is a rarity in our Gulf States. It is in the Northwestern States, in Canada, in northern Maine and New Brunswick, that this important grain grows the most luxuriantly, and makes the best flour. The reason is that the hot sun too early forces the plant to head before its farina can be concocted. The same is true of oats and barley. Wild oats are found in the southern country, but the grain is not worth threshing. Who does not know that the oats of Canada and Aroostook yield more per acre, afford a heavier grain, more suitable for meal and bread than the oats of the South and West? Before oats could do the world any good they had to come north and get acclimated to these high latitudes. The barley, too, of Maine is superior to barley in the Middle or Southern States; a cold climate gives the surest grain.

Onions, beets, turnips, parsnips and other nutritious roots, are sadly affected by a hot southern sun, and are hardly worth cultivating at the South, which must always depend upon us for all such edibles. There they fructify before they form perfect roots, go to seed the first year, and make foliage at the expense of the tubers.

The grasses are perhaps the most valuable crop in the United States—more so even than cotton. These are proverbially in perfection only in northern and cold regions.

True, grasses can be grown in the sunny South by planting the ground with the seed every year, as is done for other annual crops; but when the first crop is cut, rank and vile weeds spring up that spoil the soil for mowing or pasturage. It is impossible to fatten an animal on southern grass or hay. It is without richness or nutriment. The consequence is that in all these regions most animals browse from necessity on the foliage and buds of trees and bushes, and are poor, without size or beauty. In our pastures and in our barns, cattle and horses grow fat on grass and hay. This is because of the superior quality of northern grasses. I never saw such charming fields and pastures of rich grass as in Aroostook county, where the earth in the vernal season is covered with compact white clover, on which oxen may grow fat, and by means of which the hearty cows will give the richest milk for the sweetest butter in America. If you are a farmer and would go where you would enjoy the luxury of the richest feed and choicest butter, let me advise you to turn your face from Secessia, and go at once to the fertile and healthy valley of the Aroostook, where the State will sell you land for fifty cents per acre, and give you four years to pay for it in labor on the roads, which the State will make to your grounds.

On the subject of the delicious and pulpy fruits, let me say that these afford a still more striking illustration of our principle.

The apple, pear, peach, nectarine, plum, cherry, currant, gooseberry, and other fruits, came originally from the South, but are never found in such perfection there as here. The apple of the South is an acid thing, not fit for the dessert or to be cooked dry, or to be pressed for cider. Plums never mature till they come north. They are quite good in New York, but much better in Maine, especially in Bangor and the Penobscot valleys. The peach of Carolina is a gummy and knotty thing, never well flavored. It must travel north till it reaches the latitude of Philadelphia before it comes to perfection. There are no good grapes in the South, though that is their native place. The forests and swamps of Alabama and Louisiana are full of the vines which cover the tops of the loftiest trees, but seldom or never is a grape found on them. The excess of heat blights the fruit, and no persons pretend to cultivate it there. We must come north to find good grapes—to Ohio, Pennsylvania, and New York. Some varieties that are in perfection in those States would pass the line of success by emigrating to Maine, though we have a few acclimated kinds that are as prolific and as delicious as the Catawba at Cincinnati.

By all this it would seem that Nature allows and even requires her choicest products—both of field and garden—to emigrate northward to meet the homes of the hardy northmen, who are capable of sagacious toil; she does not make it necessary for northern cultivators to emigrate south to meet more perfect productions, under a hotter sky.—Well would it be for our people if they would take the hint from Nature's indications. The farmers and gardeners of Maine can successfully grow all the best meats, grains, vegetables, and pulpy fruits which mother earth has produced for us and the delight of man. We have all the elements of comfort around us. It is a wise proverb to let well enough alone. Let us do this, and instead of sighing for other and falsely believed better climates,

set ourselves about a cheerful performance of the duties, and reaping the benefits peculiar to the fertile and salubrious section in which a beneficent Providence has cast our lot.—*W. A. Drew in N. Y. Trib.*

Respect to the Memory of Hon. Chas. B. Calvert.

At a meeting of the Executive Committee of the United States Agricultural Society, held at the rooms of the Society, at the Capitol, on Tuesday, May 17th, 1864—

The President of the Society, Hon. B. B. French, stated that he had called the meeting for the purpose of enabling those present to pay some proper testimony of respect to the memory of their late Vice President, of the State of Maryland, Hon. Chas. B. Calvert.

Mr. Calvert, the President said, had been recently suddenly removed from his labors amongst us, in the midst of his years and his usefulness. We were called to mourn the loss of a good, a philanthropic, an energetic, and a most deserving gentleman—a man who did with all his might whatever his hands found to do.

Mr. Calvert was one of the formers of the United States Agricultural Society, and it had no more energetic friend and supporter than he was. Ever ardent and ever eloquent in the great cause of agriculture, he advocated most powerfully the establishment at the seat of government of a Department of Agriculture, and he lived to see such a department in successful operation, although not possessing those full powers of a department which he desired. Through his influence and indomitable energy the Agricultural College of Maryland was established, and in his death it has lost one of its most worthy founders and ardent friends. As a member of the House of Representatives of the Thirty-seventh Congress, Mr. Calvert proved himself a useful, business-like and eloquent Representative.

I will close, said Mr. F., these brief remarks in the eloquent words of another, so far as they apply to our departed friend:

"The messenger of death has been amongst us, and has left a bitter token of his visit. He whose counsels were wont to advise us, whose example was our encouragement, whose virtues was our pattern, has no longer a place save in our memories; the voice with which he uttered words of wisdom and truth is dumb; the eye that ever kindled with kindness is closed; the ear that was ever open to the calls of distress is deaf; the heart of sympathy has ceased to beat; the hands that labored so well and so faithfully are mouldering in the grave; the silver cord has been loosed and the golden bowl broken."

A good man has departed from amongst us; let us cherish his virtues in our memories, and imitate them in our lives.

Hon. Isaac Newton, the Head of the Department of Agriculture, then offered the following resolutions, which were read and unanimously adopted:

Resolved, That while we sincerely mourn the loss of our late friend and co-laborer, the Hon. Charles B. Calvert, Vice President of the Society, we submit with reverence to the decree of that All-wise Being who has seen fit to remove him from amongst us.

Resolved, That in the death of Mr. Calvert. society has lost one of its noblest and most honorable ornaments; the nation a patriotic and able citizen; the United States Agricultural Society one of its best friends and most consistent and ardent supporters; and his family an indulgent, affectionate and beloved husband and father.

Resolved, That as a mark of respect for the memory of our deceased friend, we will wear the usual badge of mourning for thirty days.

Resolved, That the newspapers of this city and Agricultural press throughout the country be respectfully requested to publish these proceedings; and that the Secretary communicate a copy of them to the family of the deceased.

B. B. FRENCH, Pres. U. S. Ag. Soc.

BEN. PERLEY POORE, Sec.

Salting Cattle.

Much carelessness is practiced in this respect. There is little system in salting cattle, and this is a great wrong. A creature may be killed by salt. When given in large doses, say a pound or two, it becomes a poison. When given in large but less quantity, it purges, gets up inflammation of the mucous membrane of the bowels, and other evils. A proper use is what is wanted.

Salt always on hand where cattle can lick it at leisure, is a practice with many dairymen, and one of advantage they say. They hold that the creature knows best how much it needs. We shall not gainsay this. But the rule applied by the farmer to all his stock is what is practiced by the most renowned farmers, and with profit. System is what is wanted in this as in other things. The best effects have been obtained by giving to horses about half a pound a week; cattle double and triple that portion, according to the size, age and feed; as abundant fresh feed requires more salt. Sheep are more addicted to salt, and require it more than any other animal. Though a small animal, it requires half the amount of the horse. The hog almost the same. Salt is a stimulant. This should always be borne in mind. When given too largely it acts deleteriously. When properly given, as we have pointed out, it aids digestion, adds strength and vigor to the system, and, in addition, seems to extend its preservative effect to the living as well as the dead animal, as it shields it from disease.—This has been proved by experiment, as well as by observation generally. A German savor (Uberacker), experimented with sheep, depriving ten of his sheep of salt. The experiment was tried for three years. "In the first year five of them died of rot and worms; in this year the remainder of the flock, 450 head, lost only four sheep. The second year a new lot of ten sheep, deprived of salt lost seven individuals; the remainder of the flock, 364 head, lost five only; a little later the other three died also of diarrhea. The third year was very rainy. Sixteen sheep were selected and deprived of salt. The whole of them died; in the course of the year of rot and vermicular pneumonia."

Care should be taken, where cattle are salted, that less be given in cases where fodder contains salt, particularly hay, which is often salted to preserve it. Allowance should always be made; but we fear it is but seldom done. In fact salt is too

little given in the winter, when it is most needed, and it has a warming effect upon the system. It also corrects the bowels, which are apt to be rigid in winter.—*Valley Farmer*.

Vitality of Seeds.

Farmers are often advised through agricultural papers to gather matured weeds and put them in their compost heaps. Now, I very much doubt the propriety of this advice. Although the decomposed weed stalks may be of some vitality I am very certain the seed do not lose theirs. When seeds will stand cold and heat for years, or pass through the stomach of the animal without being the least impaired, I very much doubt the decomposing process of matter with which they are connected, destroying them.

Years ago, there stood a small, thick hemlock forest in a certain locality in Ashtabula county, through which a winding wagon road, from necessity was made, and farmers often drew loads of hay through this piece of wood. When the public roads were properly laid out and fitted for use, the wood road was entirely abandoned; twenty years later the forest was cut down, and as soon as the sun's rays struck the earth here, there came up a beautiful bed of timothy, the whole length and breadth of the old road. I believe people acquainted with the circumstances, generally believe that the hay seed scattered there twenty years before, retained its vitality, and when the sun and rain fell upon it, it germinated and grew.

During the early part of summer, while weeds were in bloom, I dug a large pond-hole in my pasture, some three feet deep; soon after it was finished, there came a light shower and a warm sun; a week or so after this, the bed of the hollow was covered with small weeds. It was impossible for the seeds to have blown there at the season of the year, and the only conclusion I could come to, was that the seeds had remained for centuries in the earth without losing their vitality.

I think it far more advisable to gather matured weeds and burn them, rather than to put them into the compost heap.—[Erastus in the Ohio Farmer.]

[From the Country Gent. & Cultivator.]

How to cut Asparagus, &c.

MESSRS. EDITORS—Yesterday, 1st May, we had our first dish of asparagus from an old bed planted some thirty years or more. I have generally had it first from 27th April to 3d of May, and several times on the first of May, showing this about a usual season. Cows and sheep getting a little bite of grass, but not abundant.

Two years ago it was stated in your columns that the proprietor of Congress Hall had asparagus on the 7th of May, which was spoken of as early. Another person in the succeeding number, answered that he had it on the 6th. That year I had it on the first.

A word about the mode of cutting asparagus.—I have always seen the article in market and at public houses, which had been cut about three inches under ground, leaving that length bleached and not eatable, and but about one inch and a half at green end useful. Why do they do this so?

I never have mine cut below the surface of the ground, and use it when from six inches to a foot high, all of which will be tender and good.

I find this vegetable grows spontaneously around the slate rocks, and often very large and tender, where no cultivation or manure has been bestowed upon it. This would seem to indicate that a top-dressing of slate gravel would be useful. My bed has considerable slate in the soil, and the slate rock underlays part of the bed, if not all of it, probably fifteen or twenty inches below the surface.

Z. A. LELAND.

Mechanicsville, May 2, 1864.

Marvels in Fruit Growing—Humbuggery.

A class of minds exists in every community ready to adopt anything and everything in the line of marvels, without ever troubling themselves with an investigation of the senseless statements floating around in the papers, giving credence to these marvels. The ninety and nine persons who experiment by book and fail, keep their own counsel, regarding themselves foolishly sold by the writer of the humbug article. They shrink from an exposure, lest their own want of sagacity might be exposed thereby.

To expose all of these sells, is a task we do not propose to undertake at this time. A few in connection with fruit growing only is proposed to do. Not a few persons insist that the Apple, (one half sweet, the other half sour,) was produced, not naturally from seed, but uniting two buds in halves—one from a sweet the other from a sour apple tree. A moment's reflection will convince any one capable of reasoning, such a union to be impossible; and if otherwise, that the union would only produce a tree, the buds and branches upon one side producing one kind, and the other another kind of apples like those trees from which the half buds were taken. Commingling with the sap having nothing to do with determining the character of the fruit, as has been often, and may be again proven, by grafting different varieties in succession upon the same tree or branch, each separate section producing branches, leaves and fruit, according with the original variety from which the scions were taken, although the sap ascending and descending, has to circulate through sections of wood and bark of a different variety. The character of the fruit is, in all cases, determined or controlled by the leaves, bark and wood, and not by the sap. The character of the latter being fully controlled by them. The apple in question is not divided into two sections, the one half pure sweet, the other acid, with a well defined line dividing the parts—but is of an inferior, sweetish flavor upon one side, and a mild, sub-acid upon the other, each quality gradually blending into the other near the dividing section. The apple is called sweet and sour, and is sometimes propagated and sold by nurserymen as a curiosity. It originated as do all varieties, as an accidental seedling.

The public are humbugged periodically with an article from some novice who hurries to print his success in growing apple and pear trees from cuttings in the open ground. The cuttings will put forth leaves, and if the summer is moist, live through the first season, but failing to strike roots

die before the next summer. We know some will insist that they have seen the thing done, and can do it again. Our reply to all such is—we will hold ourselves in readiness to pay one dollar each for three year old trees produced from cuttings in the open ground—the fact to be well established by evidence of any intelligent nurseryman or fruit grower, watching the operation. Competitors may commence this spring, and the experimenter may have the benefit of sticking "his cuttings into raw potatoes," or any other similar vegetable to retain the requisite amount of moisture.

We consider what the old gentleman told a correspondent of the *Maine Farmer* twenty-five years ago (page 51, present volume of the *Homestead*,) about the process of raising seedless apples, another of this class of humbugs. In the first place, apple branches, with the tips buried with the plow accidentally or by design, will not strike roots from the tips, and if they did, would not produce trees by severing the connection with the parent stock. But if this were possible, the tree grown as directed, and bearing the inversion, could not possibly change the flower, and if not the flower, how could the fruit be changed?

These seedless apples and pears are caused by imperfect fructification at the flowering season from excessive moisture, or cold, at that season. Some varieties possessing weak organs, producing no seeds; others more perfect, others a part only perfect. The same tree will sometimes produce no perfect seeds; in more favorable seasons, all the seeds will arrive at perfection.

We recollect another of these marvels produced by grafting currents upon maple trees, pears upon butternut trees, and many other unnatural alliances said to have been forced by skillful grafting.—These are all cheats. They may, like the cuttings, live one season, but can never form a union with the stock, unless with a nearly allied species, as the Peach, Plum and Apricot—the Apple, Pear and Quince—the Potato, Tomato &c.—*Iowa Homestead*.

Report of the Agricultural Department.

The following is a synopsis of the bi-monthly report for March and April of the Agricultural Department.

The leading article shows the character of the plans adopted in Great Britain, Prussia and the United States to estimate and report speedily the amount and condition of the crops.

The table most interesting to farmers and provision dealers is the one that exhibits the amount of farm stock in January last. Compared with the amount in 1859, as returned in the census of 1860, it is as follows in the loyal States:

	Horses.	Mules.	Cattle & Oxen.
1859.....	4,199,141	301,600	7,941,148
1864.....	4,999,042	280,847	9,965,439
	Cows.	Sheep.	Hogs.
1859.....	5,726,964	15,104,272	17,060,035
1864.....	6,066,748	24,346,391	16,148,712

This table exhibits an active decrease of horses, mules and hogs, a very small increase of cattle, a larger increase of cows, but one still far below the usual increase, and a very great increase of sheep.

The report points out the strong inducements that farmers have to increase all kinds of stock that is falling off. The number of Sheep will be increased by the lambs of the spring to nearly thirty millions, or double what it was in 1859.

The decrease in hogs is 914,323. This is an important fact to provision dealers and farmers, for it shows that but few hogs, if any, were kept over on account of the loss of the corn crop, as has generally been believed. The condition of hog raising from 1861 to this time is examined, and the opinion given that even if there had been a good corn crop there would have been a decrease in the number of hogs packed.

The number of fattening cattle reported is to be 30 per cent. less than last year in Pennsylvania, Ohio, Indiana and Michigan, 25 per cent. less in New York, Iowa and Illinois, and 20 per cent. less in Missouri and Wisconsin. The general decrease is nearly 30 per cent.

The condition of nearly all stock is below the usual spring average, especially of hogs, but sheep are in excellent order, having received more than ordinary attention. Hence the yield of wool per head will be as much as usual.

The condition of wheat and other crops sown last fall is represented as indicating a largely decreased product from the crop of last year, but it is hoped they have improved from the recent rains, and since the returns of the correspondents were sent in, which was on the first of April. The dryness of February and March retarded the usual growth in these months.

It is believed that the production of maple sugar and molasses will be unusually large as the preparations for it were greater than usual.

Bees are reported as having suffered much during the winter. The usual amount of statistics, showing the trade in agricultural products, is given, and the meteorological part of the report, prepared at the Smithsonian Institute, is very full, and completely exhibits the phenomenon attending the remarkable cold storms of the past winter.

The rains have been heavy and general, retarding much the putting in of spring wheat and other crops; but whether the amount put in will be materially lessened in consequence cannot now be known.

[From the Co. Gent. and Cultivator.]

Remedy for the Curculio.

EDITORS CO. GENT.—The ravages of the curculio, in many portions of the State of New-York, as well as other States, have become so disastrous to the plum crop as to render it at least uncertain, and in some localities an almost utter failure; and yet cultivators appear to have failed hitherto either from supineness or want of energy, in discovering some means of staying the wide-spread destruction, or checking the rapid increase of the destroyer. For the benefit of your readers, I cut the following from the Cincinnati Gazette, in the hope that it may prove as successful in New-York as the writer claims it has in Kentucky. It is not impossible that it may prove alike beneficial as an exterminator of the coleoptera which infest the vines of our gardens.

CLARK C. HASKINS.

New Albany, Indiana.

Mr. Winn Gunn of Shelbyville, Ky., sends us the following interesting statement in reference to the destruction of this pest of fruit:

In the spring of 1860, I noticed some of my plums punctured. Having succeeded in catching the striped bug that is so injurious to melon vines—by placing wool on the hills around the young plants. I concluded to try it around my plum trees. I removed the grass about a foot around the tree—placed trash-wool on the cleared ground, and wrapped it around the forks of the tree. On looking the next day, I found my trap had caught "*a number of the enemy*," they having become entangled in the wool. This tree produced a bountiful crop, while the fruit on the others in twenty feet of it, "came to naught." In 1861 I treated part of the others the same way, with like result. Also in 1862. In 1863 I treated all my trees the same way. A more healthy and abundant crop of plums I never saw. I have eight varieties; I have a freestone damson that deserves a place in every fruit-yard being harby and very prolific—a superior fruit for canning or drying.

CHEESE PER GALLON OF MILK.—In family cheese-making there is considerable difference in the quantity of cheese produced by different persons from a given quantity of milk. A skillful manufacturer should, during the season, average a pound of pressed curd from a gallon of milk, *wine measure*, or a pound of curd cheese from a gallon of milk, *beer measure*. When at the factories in June, 1862, I was told that 600 cows were then producing daily about 1450 *wine gallons* of milk, which turned off 1250 pounds of pressed curd. The curd at this factory was divided up and pressed into eight cheeses. At another factory, where the milk of some 400 cows was used, the produce was 965 gallons, *beer measure*, making 1120 pounds of pressed curd, or about 114 pounds of curd to 100 gallons of milk, though I was told the quantity of curd varied from day to day, some days being several pounds less than in the proportion above stated.

At this factory the curd was divided up into four cheeses of about 280 pounds each. The shrinkage on the cheese while curing, in the first factory mentioned, would average, it was said, about five per cent. Milk of course varies in quality at different seasons of the year. In the fall as the quantity decreases, it is richer, and some cheese manufacturers deem its condition too thick to be worked with the best advantage into cheese; they therefore thin it down by adding water at the rate of one gallon to ten gallons milk. This dilution, it is claimed, produces a better curd.—X. A. Wilmot, in *Trans. of N. Y. Ag. Society*.

Heavy Frost at Nashville.

The temperature of the weather dropped down on Monday night, May 2nd, to 32 degrees; and as a consequence, there was yesterday morning a heavy white frost. A gentleman from the country assures us that on his strawberry bed it was as thick and white as any he has seen in December. Tender garden vegetables were killed outright, and it is apprehended that fruits have gone the same way. We hope, however, enough has been spared for all useful purposes. We don't like the idea of giving up the fruit crop. How could we do without our usual supply in season, of strawberries, peaches, etc.—*Nashville Union*.

The Probable Clip of 1864.

We learn from a correspondent in Michigan, who is well situated for getting a good knowledge of the condition and prospects of Wool in that State, that the clip of 1864 in Michigan will probably be twelve millions of pounds, and possibly more. The estimate of well informed parties in Ohio, is that the clip of this State will not be less than twenty-four millions. We would be much obliged if the Secretaries of State Agricultural Societies, or any other informed friends of the wool growing interest, would send us the estimate of the probable clip of their respective States.—*Wool Grower.*

Kelly's Island Grapes.

The Isabella grapes on Kelly's Island are generally killed. The Catawba are sending out a few buds; some young vines will make pretty fair growth, while the buds on the best and largest wood are pretty generally killed. The Delawares are all alive, and putting out vigorously. It is expected that there will not be a half crop this year.

Poetry.

From the Country Gent. and Cultivator Barnyard Lyrics.

A robin builds my trees among,
Mid blossoms that perfumes distil;
I know that with her fledgelings young,
She means her downy nest to fill.

I walked beneath the Mayduke tree,
Where, sheltered, hangs her safe retreat;
From rude alarm all round her free,
We daily there confiding meet.

I stand beneath the leafy shade,
Where from the soft maternal glow,
Each quickening pledge that there she laid,
Its mystic being it shall owe.

My step she knows, she knows my face,
Familiar seems each garden tree;
Each year she seeks her ancient place.
As long from rude invasion free.

At noon her songs melodious rise,
Their echoes all the homestead fill;
When twilight comes o'er evening skies,
She sings upon my window sill.

I doubt not He who reigns above,
By whom all prayer sincere is heard,
Counts this an offering of the love
That thus attunes my darling bird.

Each warbler through creation wide,
A grateful tribute skyward brings;
The meanest thing with voice supplied,
His little anthem daily sings.

I would not harm, I could not slay
These songsters of the sunny earth;
I would not rudely drive away
E'en the shrill cricket from my hearth.

I love the soft, confiding things
That cluster round my homestead old;
They need not all have glossy wings,
They may be either tame or bold.

The wrens have built their tiny nests,
In bush and tree my garden round;
A box the bluebird's eye arrests,
And there his early home is found.

With gourd and squash, unsightly all,
My garden trees are thickly hung;
In barn and shed and open stall,
Attractive homes are round them strung.

The swallows build the eaves below,
Beside them builds the dull pewee,
And mounting high and plunging low,
The kingbird seems at home to be.

A vine's ambitious tendrils sweep
A lofty cedar's utmost height;
Its dense recesses safely keep
My noisy catbirds out of sight.

'Tis thus around my friendly home
I bid the gentle warblers stay;
If long and wide by day they roam,
Not one at night will truant play.

When insect crowds my fruit devour,
When bugs the garden truck would kill,
My birds I see, by daybreak's hour,
Attack the foe with hungry bill.

From limb to limb, from spray to spray,
They seek the leafy vampire out;
The worm that crawls at break of day,
Is sure to find the birds about.

Though high upon the topmost leaf,
Though snug within a flowret gay,
His time is come, the shrift is brief
He's gone unto the nest away.

My ripening fruits their care attest,
My grapes a melting record show;
My crops I find are always best
When birds are swarming high and low.

'Tis true the robin claims a share,
'Tis true the cherries he will take;
I know the catbird's bill of fare
He'll often of the grapevine make.

I let them have their dainty fill,
The luscious taste with me to learn;
For thus I pay with right good will,
Whate'er my feathered laborers earn.

Oh? brothers of the plow and hoe!
Oh! tillers in the sunny field!
Oh! maids that weed the garden row!
Oh! all whose hearts are yet unsteeled!

The birds that in the landscape sing,
Their gentle lives I bid you spare;
Your fields can show no living thing
That more deserves your tender care.

My pets my presence never shun,
It wakes no sharp, alarmed cry;
I never yet, by bow or gun,
Have made a single warbler die.

No loafers rude my farm invade,
No game to sportsmen it supplies;
No wolfish dog for thieving made,
My home approaches but he dies.

Oh, youth! oh, age! oh, maidens fair!
Attend my last imploring words—
I bid you in compassion spare
All these, our dear domestic birds.

May, 1864.

Editor's Table.

BAKER & PHILLIPS - - - PUBLISHERS.

M. L. DUNLAP, Editor.

SPRINGFIELD, ILLINOIS, JUNE, 1864.

Thus far May has been a favorable month for the farmer, and this time of writing (May 23d) the work is in good state of forwardness. On Saturday 21st we drove into the country several miles and was astonished at the amount of corn planted, thousands of acres of which was cleverly up. Farmers have been put to their utmost, and every member of the farmer family are busy. Women or little girls of twelve to fifteen years old do the check-rowing, or rather, working a check-row machine, for we did not see a single field that was check-rowed so as to work the corn both ways.—The two horse cultivators do the work so thoroughly that cross working is not required. Rolling and harrowing is becoming more and more popular, and although the land is not cloddy all roll who have the time or the implement. We saw one man who had *listed* his land; that is, plowed out the old corn hills, or “cut and covered,” as it is called at the East. He dropped the corn from a small pail hung on his left arm, while with the left hand he led his team with a harrow, dropping the corn between the two furrows, thrown near together by the *listing*, and thus covered the seed and smoothed down the surface. In this way he could *list* about four acres a day, and would probably drop and harrow in six; that is, with five days’ work would get in twelve acres. This man had no one to help him but will put in at least sixty acres with one team, his plow, harrow and tin pail.

Spring wheat and oats look well; of the latter a large breadth is sown. There is considerable rye but little wheat; corn is the great staple. Many large farmers have laid their lands down to grass and intend to ship the hay. At the present high price of hay for shipment they will make money.

A NEW PLOW.—John Deer, of Moline, the veteran plow maker, has sent us for trial one of his last cast steel plows, patented July last.

After several weeks’ use in all kinds of plowing we deliberately pronounce it the most valuable plow that has come into our hands. We congratulate our farmers that they now have a plow superior to the Hartford cast steel plow, made in and for the West. The fault with all Eastern plows made for the West is that they are too heavy and clumsy. In this new plow we have all the light-

ness simplicity and ease of drop of the Moline steel clipper, with a durability added that render the rowing parts of great value. The shoe, landside and mouldboard being of the best quality of cast steel, it is impossible to clay them in any soil when the plow is in proper order. We have some land that from continued deep plowing in which the steel clipper (cast steel) would not scour, but in which the new plow turns a most beautiful furrow.

The Moline steel clipper is the standard among plows, and the nearest possible approximation to it by other makers has been aimed at, and their success has been in proportion to their skill in imitation. Mr. Deer should go one step further and mount his new plow on wheels, when we will have all that is desired in a plow.

The casting of plows from cast steel must mark a new era in plow making, which will result in a more durable implement, and one that will scour in all soils, besides cheapening their cost. It must be evident that it will cost less to cast than to forge a plow. The Hartford cast steel plow has become popular from its durability and should have come into more general use, but the high price at which it has been held and its great weight—two stumbling blocks in its way, both of which are removed in the new patent of Mr. Deer.

This plow is admirable for all kinds of work, such as old land, second sod and meadow lands, a wheel coulter and gage wheel enabling it to do good work in all turf land except raw, impastured prairie.

CULTURE OF CORN.—Up to this date, May 20th, we have planted 20 acres of corn at the following cost:

Use of land.....	\$100 00
Ten days’ plowing last autumn.....	30 00
Three days’ cultivating with Stafford’s	
Cultivator.....	9 00
One and a half days’ planting.....	4 50
“ “ “ boy to assist.....	1 00
Three and a half days’ harrowing.....	10 50
One and a half days’ rolling	4 50
Three bushels seed corn.....	3 00
	<hr/>
	\$162 50

or \$8 12½ per acre.

The three dollars a day is intended also to cover the use of implements. We need not say that the land is in fine order, for every farmer knows that it cannot be otherwise.

We intend to continue these figures to show the actual cost of our corn crops.

We are putting in twenty acres of corn on spring plowing. We have now spent but a trifle over a day to the acre with our corn; had we a planter attached to our roller we would have made a saving of six dollars in labor and had the work just

as well done. Six dollars on twenty acres, or thirty dollars on a hundred acres, or three hundred dollars on a thousand acres, or thirty thousand dollars on a hundred thousand that will be planted in this part of the State—who will supply this demand? A new implement is called for, who will invent it and pass it over to the farmer? We have been threatened with the use of one this spring, but, thus far, the threat has not been put into execution.

Perhaps we shall have further reductions to make next spring, with the use of Comstock's Rotary Spader. Come ahead, gentlemen inventors, the prairies were made just to give you a chance, a wide field for your genius.

Culture of Potato.

In the first place our land was plowed last fall, (stubble land.) We should have planted in April but the wet weather and hurry of tree planting prevented. The first spring operation was to roll the land to crush the lumps; it was then laid off three and a half feet wide with a Stafford cultivator, using five shovels, this gave the surface a pretty thorough culture. The seed was cut one to two eyes on a piece, and these pieces dropped ten inches apart, and covered with the cultivator. After ten days the whole was thoroughly harrowed and rolled, which brings the work down to May 20th, when the plants are nearly up. The vines, all planted, have cost 5 days, plowing, 1 day's rolling, 1½ days' laying off, 1½ days' covering, 1½ days' harrowing, and 1 day's rolling—11½ days' team work; to which add 4 days' dropping seed. The cutting was done rainy days and at odd times, and no account kept. We will charge the crop up to date:

Use of land, \$5 per acre.....	\$45 00
Eleven and a half days' team work.....	34 50
Four days' dropping, \$1 25 per day.....	5 00
Fifty-four bushels seed (small.).....	27 00
Cutting seed.....	5 00
	<hr/>
	\$116 00

or \$13 per acre. This is no estimate but actual facts.

Small Potatoes for Seed.

Small potates may be planted for one year, and perhaps the product may be as good and abundant as if the large and fair ones had been used for seed. But it is bad policy to select and plant small potatoes from year to year. We once followed this up for five years, for the purpose of testing the theory, and we found that the fifth crop was hardly worth digging, the potatoes were so few and small. They were literally "small potatoes," tops and all.—*Cor. Coun. Gent.*

The Germans near Chicago furnish a large portion of the supply of potatoes for the city, and it is a

rule with them to plant the small potatoes. This has been done for the past twenty years, and they continue to grow as good potatoes as any that is brought to market. For more than ten years past we have adopted the same plan as a general thing, with an occasional trial of large ones, but we have not been able to see the difference in the growth or fairness of the tubers. Our potatoes always command a ready sale, and generally above the market for their fineness. We should have said that the Germans think the crop better from small than large seed.

COMSTOCK'S ROTARY SPADER.—We have a letter from W. L. Sullevant, of Homer, who has four of these spaders to work, and is delighted with them.

We intended to have seen them at work but have been too busy planting and other spring work to leave home.

The Weather.

THERMOMETER IN THE OPEN AIR.

Day of Month.			7 A. M.	2 P. M.	9 P. M.
1864.	April	..... 1	40	42	44
"	"	..... 2	40	58	46
"	"	..... 3	40	62	48
"	"	..... 4	45	44	42
"	"	..... 5	43	48	46
"	"	..... 6	44	64	50
"	"	..... 7	42	58	64
"	"	..... 8	54	54	46
"	"	..... 9	52	56	46
"	"	..... 10	43	54	46
"	"	..... 11	48	52	50
"	"	..... 12	46	52	44
"	"	..... 13	38	48	44
"	"	..... 14	42	56	46
"	"	..... 15	38	51	40
"	"	..... 16	32	46	42
"	"	..... 17	30	48	44
"	"	..... 18	36	48	44
"	"	..... 19	38	57	42
"	"	..... 20	43	58	50
"	"	..... 21	54	56	52
"	"	..... 22	54	64	58
"	"	..... 23	59	62	50
"	"	..... 24	53	50	50
"	"	..... 25	46	54	54
"	"	..... 26	48	62	62
"	"	..... 27	46	49	44
"	"	..... 28	45	59	48
"	"	..... 29	47	66	61
"	"	..... 30	49	52	50
Means			27½	54½	48½
Mean for the month.....			49		

During the month we had frost on four occasions, 17, 19, 20 & 29th. with a brisk snow storm the 16th. On the whole a cold backward month, though favorable for wheat and fruit.

Special Notices.

AGENTS.—We do not appoint any agents—all are voluntary. Any person so disposed, can act as agent in any place.

ENLARGE YOUR CLUB.—Will not the friends of the ILLINOIS FARMER inquire how many copies of the FARMER are taken in their respective offices, and pass around among those who ought to have their names added to the list? Our terms are so low to clubs of ten and twenty that we ought to have one or the other made up at every office in the State, and at every office in Central Illinois, one of twenty or more. Will our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?

TO SINGLE SUBSCRIBERS.—You receive the only copy of the FARMER that goes to your post office. Can you not send one, two, three or more new subscribers, without any trouble? Try. Sample numbers, etc., sent free.

DRAFTS.—Those remitting us large amounts of money, will please send us drafts on Springfield or Chicago, less they exchange. If you send cash in a letter, be sure that it is well sealed and well directed, to Baker & Phillips, Springfield, Illinois.

THE FARMER AS A PRESENT.—Any of our subscribers who wish to make a present of the ILLINOIS FARMER for 1863, can have it at the lowest club rates, when out of the State. For fifty cents you can treat your Eastern friends to a Western Agricultural Paper. In no way can you invest that amount to so good advantage to emigration.

SEND NOW.—Any person who remits pay for a club of ten or fifteen, or any other number at the specified rates for such clubs, can afterwards add to the clubs, and take advantage of the reduction. Thus a person sending us five subscribers and three dollars, can afterwards send us three dollars more and receive six copies.

TO THE CASUAL READER.—This and other numbers of the ILLINOIS FARMER will be sent to many persons who now use it for the first time. Will they not examine it, and if they like it, subscribe for it, and ask their neighbors to subscribe? Sample numbers, prospectuses, etc., sent free to all applicants. See terms elsewhere.


HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighborhood, can easily make up a club of five, ten or twenty, but no time should be lost in doing so, for your neighbors may send east for their


paper which, though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us Western farming.


HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage:


1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it.
2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them.
3. Get post masters interested. They see everybody, and are efficient workers.
4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers.
5. Begin now, before the agents of Eastern papers get up their clubs.

This last hint is especially important. Let us hear from you soon. See terms elsewhere.

 Clubs may be composed of persons in all parts of the United States. It will be the same to the publishers if they send papers to one or a hundred post offices. Additions made at any time at club rates. We mail by printed slips, which are so cheaply placed on the papers, that it matters little whether they go to one or a dozen offices.

 Correspondents will please be particular to give the name of the post office, county and State.

 Specimen numbers will be sent gratis, upon application.

 Address

BAKER & PHILLIPS,
Springfield, Illinois.

SPECIAL NOTICE.—For terms see prospectus on last page. All exchanges and communications for the eye of the editor should be directed to ILLINOIS FARMER, Champaign, Illinois. Electrotypes and business matters, and subscriptions, to the publishers, Springfield, Illinois. Implements and models for examination should be sent to the editor. The editor will, so far as it can be done personally, test and examine all new machines and improvements submitted to his inspection. He will be found at home, on his farm, nearly all of the time. So far as it is possible, the conductors on the Illinois Central Railroad will let off passengers at his place, which is directly on the road, three and a half miles south of the Urbana Station, now the city of Champaign.

FURST & BRADLEY,

MANUFACTURERS OF

PLOWS

AND OTHER

Agricultural Implements,

Nos. 55 and 58 North Jefferson Street,

near Corner of Lake Street,

CHICAGO, ILLINOIS.

Plows of all sizes and patterns, Cultivators, Horse Hoes, Harrows, Corn Shellers, Straw Cutters, Garden and Rail Road Wheelbarrows, Road Scrapers—five different patterns—Sulky Corn and Grain Cultivators, Sulky Hay Rake, with steel wire teeth revolving.

Send for a priced Catalogue.

FURST & BRADLEY

April-64-1y*



NANSEMOND SWEET POTATO PLANTS,—strong and well rooted, from May to July. Put up to carry 1000 miles in good order. Price, 300, \$1.00; 1,000, \$2.50; 5,000, \$11.00; 10,00, \$20.00. My plants of this variety produce good crops at the North.

Send for my circular of directions for cultivation, &c. Address **M. M. MURREY,**
Fruit Hills, near Loveland, Ohio.

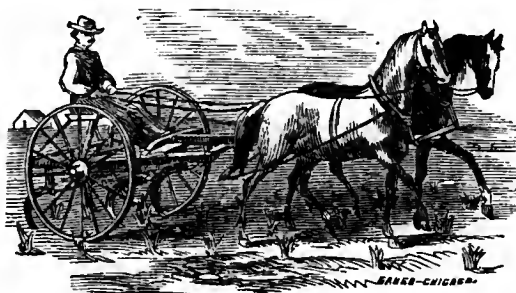
WEEED'S TREE AND PLANT PROTECTOR WILL protect trees against injury from AUTUMN, WINTER OR SPRING FROSTS, and secure an annual crop of Peaches, Apricots, Nectarines, Heart Cherries, Blackberries, Strawberries in any part of the Central or Northern States; and prevent all loss of trees or plants by *Winter killing*.

Patented Oct. 21st, 1862, and Dec. 8th, 1863,

JAMES WEED,
Muscatine, Iowa.

April-64-3mo*

GET THE BEST



STAFFORD'S

FIRST PREMIUM

CULTIVATOR.

The only one combining all the Mechanical Principles necessary to a

PRACTICAL AND SUCCESSFUL OPERATION

IN THE FIELD.

The lateral or self-adjusting motion of the plows and is an effectual

BAR AGAINST BREAKING,

When it comes in contact with unsoen obstacles.

It is Made of the Best Material,

BY EXPERIENCED WORKMEN.

THE SHOVELS OF FIRST QUALITY

OF

CAST STEEL.

Altogether, it far excels all others in point of

**Utility. Durability and
WORKMANSHIP.**

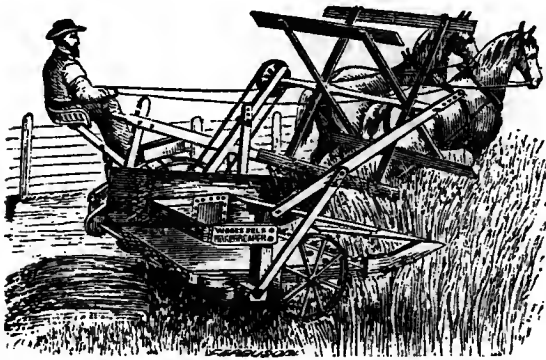
Price \$50 cash on board the cars at Decatur.

Send for Descriptive Pamphlet.

BARBER & HAWLEY,
Manufacturers,
Decatur, Ill.

March, 1864—3m.

VICTOR OF THE WEST.

 WOOD'S
 SELF RAKER,


COMBINED AND SINGLE.

This Machine has won for itself the enviable title of "*Victor*" having vanquished all the self raking machines made or sold in the West, at the

GREAT DIXON REAPER TRIAL,

held under the direction of the Ill. State Agricultural Society, which was the largest and most thorough field trial ever held in this country—over forty machines entering for competition.

W. A. WOOD'S SELF RAKER

was awarded the *first* prize as a Reaper.

Again, at the DeKalb trial last season, where there was a great struggle among all manufacturers for three days in the field, W. A. Wood's received

THE FIRST PRIZE

again as a Reaper.

This Machine is warranted to be the lightest draft Reaper made.

The most simple and durable.

Having the least side draft, and

Being the best Self Raker in the world.

Making a gavel any size at will of driver.

For further particulars send for Circular.

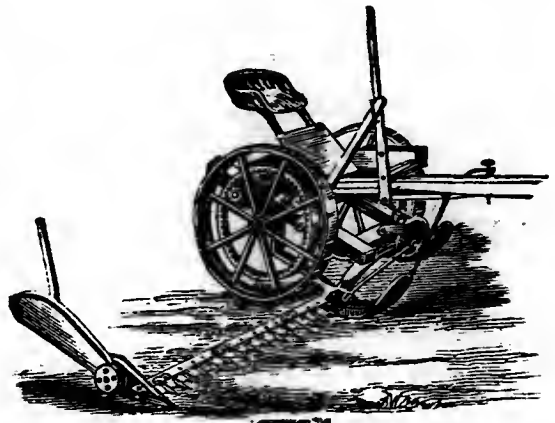
CHARLES E. WHITMAN.

General Western Agent,

206 Lake St., Chicago.

April-3mo

CHAMPION OF THE WORLD.

 WOOD'S PRIZE MOWER.


The superiority of Wood's Mowing and Reaping Machines is now fully established, both in this country and Europe.

The Prize Mower, of which there were made and sold over Six thousand last season—a larger number by far than was made by any other manufacturer in the world, yet the demand is not supplied—is offered this season with many valuable improvements. (See Pamphlet.)

To Wood's Prize Mower has been awarded more high premiums than any other Machine during the same time.

POINTS OF SUPERIORITY.

It is the lightest draft mower in use.

It is the most simple machine made.

It is the most durable.

It has no side draft.

It has no weight on horses' necks.

It will cut all kinds of grass without clogging.

It is sold at a very low price.

It cuts very close to the ground.

For full particulars call on Local Agents, or send for pamphlets to

CHARLES E. WHITMAN,

General Western Agent,

206 Lake St. Chicago.

 Large stock of Extras constantly on hand.

April-3mo

FRUIT TREES.

HAVING largely increased my variety of

NURSERY & GREEN HOUSE STOCK,

I am now prepared to fill orders for

FRUIT & ORNAMENTAL TREES,

A new and complete assortment of

Grapes, Strawberries,
Raspberries, Currants,
And all other kinds of
SMALL FRUITS.

Also—A Full Assortment of

GREEN AND HOT HOUSE PLANTS,

FLOWER AND VEGETABLE SEEDS,

Bouquets and Cut Flowers,

GOLD FISH,

and all kinds of

Ornamental Work.

All orders addressed to

J. S. COOK,
Box 1029, Cin. O.

will receive prompt attention.

Seed Store, 197 and 199 Walnut st.
February, 1864. 4m.

ONLY

TWENTY-FIVE CENTS A YEAR.

THE CULTURIST,

A handsomely illustrated monthly Journal, devoted exclusively to

AGRICULTURE AND HORTICULTURE.

Specimen copies furnished without charge. Address Editor and Publisher,

A. W. SPANGLER,
No. 25, North 6th st.,
Feb., 1864—3m* Philadelphia.

HOVEY'S AGRICULTURAL WAREHOUSE AND SEED STORE.

Has one of the best selected stock of implements and seeds to be found in the West.

A. H. HOVEY,
Nov 1862 No. 194, Lake st., Chicago Ill.

GROVER & BAKER'S LEWING MACMINES
were awarded the highest premium at the following State Fairs of 1863, for the Best Family Sewing Machine, the Best Manufacturing Machine, and the Best Machine Work:

NEW YORK STATE FAIR.

First Premium for Family Machine.
First Premium for Double Thread Machine.
First Premium for Machine Work.

VERMONT STATE FAIR.

First Premium for Family Machine.
First Premium for Manufacturing Machine.
First Premium for Machine Work.

IOWA STATE FAIR.

First Premium for Family Machine.
First Premium for Manufacturing Machine.
First Premium for Machine Work.

MICHIGAN STATE FAIR.

First Premium for Family Machine.
First Premium for Manufacturing Machine.
First Premium for Machine Work.

INDIANA STATE FAIR.

First Premium for Machine for All Purposes.
First Premium for Machine Work.

ILLINOIS STATE FAIR.

First Premium for Machine for All Purposes.
First Premium for Machine Work.

KENTUCKY STATE FAIR.

First Premium for Machine for All Purposes.
First Premium for Machine Work.

PENNSYLVANIA STATE FAIR.

First Premium for Manufacturing Machine.
First Premium for Beautiful Machine Work.

OHIO STATE FAIR.

First Premium for Machine Work.

The above comprises all the Fairs at which the GROVER & BAKER MACHINES were exhibited this year. At nearly all of them the leading Sewing Machines were in competition.

The GROVER & BAKER S. M. Co. are the only parties who manufacture and sell Machines which both SEW PERFECTLY and EMBROIDER PERFECTLY.

GROVER & BAKER S. M. COMPANY,

115 Lake Street, Chicago.
jan 18-64-1y

THE AMERICAN HOG TAMER—

Invented by Reuben Hurd, a farmer of twenty-seven years experience in Illinois.

My Tamer will stop any hog on earth from rooting, from a pig to an old hog by one simple application.

By any one sending three dollars to Reuben Hurd at Morrison, Whiteside county, Ill., he will receive one free of freight; and I will warrant them to give perfect satisfaction, or money refunded.

To those sending: Please name the railroad station you wish them shipped to, as I keep a constant supply on hand, and will be able to fill all orders with promptness and dispatch.

Directions for using will accompany all orders.

REUBEN HURD.

Nov. 1, 1863—6m.

EVERGREEN SEEDLINGS.

A very large stock of superior grown Evergreen Seedlings, at less than one-half the Eastern Prices.

PER 1,000.

NORWAY SPRUCE, two years old,
three to five inches, \$5,00

NORWAY SPRUCE, three years
old, six to nine inches, \$8,00

SCOTCH PINE, two years old,
three to five inches, \$7,00

AUSTRIAN PINE, two years old, \$2 per 100.

BALSAM FIR, RED CEDAR, ARBARVITÆ, &c., &c.,
of large or small size, at very low rates.

A large stock of CONCORD GRAPES, one of the
best varieties for the West.

A large stock of RED DUTCH CURRANTS, the
best for market, two to three years old, at half the
usual rates.

STANDARD AND DWARF PEARS, of well
tested varieties, together with a good assortment of
Fruit and Ornamental Trees, &c., &c..

Send for Catalogue. ROBT. DOUGLAS.
WAUKEGAN, ILL. tf

TO GRAPE GROWERS.

The subscriber has a large stock of the most vigor-
ous growth layers of the following desirable varieties,
which he will sell at very low rates, to wit:

CONCORD. \$55 per 1,000.

A few thousand of bearing age, of large size at
\$75 per 1,000.

These will produce a good crop the second year.

HARTFORD PROLIFIC, \$10 per 1,00, or
ten for a dollar.

REBECCA, \$10 per 100.

DIANA, \$10 per 100

The above will be well packed,
to go any distance.

TERMS—Cash, or approved bank paper o
short date.

JAMES SMITH.

DES MOINES IOWA, Jan. 1, 1863.

WANTED. KNITTING MACHINES.

Every Farmer to know that his "Women Folks
can earn \$6 to \$20 per week with one of Akin's Cele-
brated Knitting Machines. It will earn its cost in
thirty days. Price complete \$75. Weight 45 pound.
Freight from 50 cents to \$1 50. Send for circular
and samples, (send stamps.)

BRANSON & ELLIOT,
General Agents,
120 Lake street, Chicago, Ill.

Apr '63 ly

BLOOMINGTON NURSERY BLOOMINGTON, ILLINOIS.

Eighty Acres Fruit and Ornamental Trees

200 NAMED SORTS TULIPS, ALSO HYACINTHS
Crocus, and a general assortment of Bulbs
and Flower Roots for Fall and Spring planting.
Nursery stock, Evergreens, Greenhouse and garden
plants—all at wholesale and retail at lowest cash
rates.

For particulars see Catalogues or address subscriber
F. K. PHOENIX.

Bloomington, Ill., Aug. 1, 1859.

Dunlap's Nursery.

This nursery has good atock of apple trees of all
ages and of choice varieties for the west, low heads
and stacky. The genuine "May Cherry," (Kentish
or Early Richmond of Downing,) Dwarf and Stand-
ard Pears, the Purple Cam. Raspberry, the best of all
raspberries for the farm; Lowton Blackberry, Hough-
ton Gooseberry, Grapes, Strawberries, Ornamental
Trees and Plants. An immense stock of Silver Leaf
Maple, from \$5 to \$15 per 100, 6 to 10 feet high. The
green house is well stocked with roses and other bud-
ding out plants. This stock is grown to retail and
not adopted to the tree peddler, as all trees and plants
are large, stacky and thrifty, and intended for the
planter only. Terms cash with low prices.

Address, M. L. DUNLAP,
Champaign.

March 1, 1863.tf

ROSS, THOMPSON & CO.

(Successors to G. S. Thompson.)

CAPITAL PENSION & BOUNTY AGENCY.

OFFICE ON WEST SIDE OF 5TH STREET,

Opposite State House, over L. Greeble's Clothing Store

SPRINGFIELD, ILLINOIS.

BOUNTY AND BACK PAY, PENSIONS, RECRUITING

CLAIMS, CLAIMS FOR HORSES LOST IN

SERVICE, ARREARAGES OF PAY

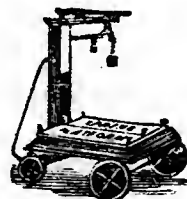
DUE RESIGNED OFFICERS,

&c., &c., &c.

Our experience and acquaintance with the details
of business in the various departments, and the per-
sonal attention of one member of the firm at Wash-
ington, afford us every facility for the prompt collec-
tion of all classes of military claims.

If you have any claims of any description against
the government, give us a statement of the facts, and
we will tell you what your rights are in the case. A
letter of inquiry may save you much trouble, expense
and perhaps loss. All communications enclosing a
stamp for return postage promptly answered. In-
formation gratis. No fees charged until money is
collected. Charges low. Pensions for \$5, as regula-
lated by act of Congress. Address

ROSS, THOMPSON & CO.,
Capita Pension and Bounty Agency, Springfield, Ill.
dec63-tf



FAIRBANKS'
STANDARD
S C A L E S
OF ALL KINDS.

Also, Warehouse Trucks, Letter Presses, &c.

FAIRBANKS, GREENLEAF & CO.
172 LAKE STREET, CHICAGO,

Sold in Springfield by

E. B. PEASE.
Be careful and buy only the genuine. i nel-ly

The Illinois Farmer,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE.

PUBLISHED AT

SPRINGFIELD, - - ILLINOIS,

BY

BAKER & PHILLIPS,

AND IS EDITED BY

M. L. DUNLAP, Tribune's Rural.

TERMS IN ADVANCE.—\$1 a year; two copies 1 50; five copies \$3; ten copies \$6, and one to get up of the club twenty copies \$10.

It is not necessary that the club should all be at one office—we send wherever the members of the club may reside. The postage on the FARMER is only three cents a year in the State of Illinois, and six cents out of it. Specimens numbers sent free on application. Subscription money may be sent at the risk of the publisher.

Exchanges and communications for the eye of the Editor should be addressed, ILLINOIS FARMER, Champaign Illinois. All business letters are to be directed to the publishers, Springfield.

TERMS OF ADVERTISING:

	1 mo.	3 mo.	6 mo.	12 mo.
One page, or two columns.....	8	\$20	\$35	\$50
Half a page or one ".....	5	12	20	30
One fourth page or half column..	3	7	12	18
One eighth or one fourth " ..	2	4	7	10
One square of ten lines.....	1	2	4	7
Card of five lines one year.....				\$5 00
Ten cents a line for less than a square each insertion.				

All worthy objects advertised, and those of importance to the Farmer will receive, from time to time, such editorial notices as the Editor may consider them worthy of, without additional charge. Implements and seeds to be tested should be sent direct to the Editor, at his residence, Champaign. We have put the price of advertising within reach of all. It will enable those who like to freely advertise their goods, to do so at a cheap rate. Terms, cash. Yearly advertisers will pay semi-annually, and all transient advertisements must be accompanied with the cash to insure insertion. BAKER & PHILLIPS, Publishers. Springfield, Ills.

THE ILLINOIS STATE JOURNAL

IS CONFIDENTLY OFFERED TO THE PEOPLE OF Illinois as the best and most reliable news, political and commercial paper within their reach. It is published at Springfield, the Capital of the State, and is the medium of all official notices, published by State authority. Particular attention is given to commercial affairs and every number contains copious reviews of the markets in the principal cities.

TERMS:

One copy one year.....	\$2 00
Three copies one year..	5 00
Six " "	7 50
Ten " "	12 00
Twenty " "	20 00

Payable always in advance. Persons sending clubs of ten and upwards shall be entitled to an extra copy. Address BAKER & PHILLIPS, Springfield, Illinois.

Sanford & Mallory's Flax and Hemp Machines.

These celebrated machines are on exhibition and in operation in a building adjoining the Chicago Sugar Refinery. For circular telling all about them, price, &c., address NELSON STILLMAN, General Agent, Chicago, Ill. P. O. Box 5823. May 1'63. ly

A GOOD INVESTMENT.

ONE THAT PAYS.

THE

"PRAIRIE FARMER,"

Has now been published in Chicago, Ill., for twenty-two years, without intermission. It is devoted to the Producer's interests, treating of GENERAL AGRICULTURE, STOCK RAISING, HORTICULTURE and POMOLOGY, And DOMESTIC ECONOMY generally. The Publishers' aim will be to give such information and assistance as will enable the farmer to grow the largest crops with the least expense, and what is equally important to assist him in securing the

LARGEST PRICES

the market affords, by giving such reliable information that is obtainable concerning the markets at home and abroad—the cost of forwarding produce to market, and other attendant expenses—thus enabling the producer to take advantage of the conditions of the market in dispensing of his produce.

FORM OF PAPER.

The paper consists of 16 pages large quarto, making a convenient size for binding and reference. A full index is given at the end of each six months. CONTENTS.

About five pages are devoted to General Agriculture; one to two pages to Horticulture; one page to Literature; two or more pages to General War Miscellany and News; two pages to Markets and Record of Season, and asking and answering questions, and general editorial items. A portion will also be devoted to Advertisements of such character as is appropriate to an Agricultural paper.

DR. GEO. H. DADD.

This celebrated Veterinary Surgeon will contribute regularly to the FARMER, giving especial attention to the answering of questions and giving information upon matters interesting to stock growers.

A NEW VOLUME

Commencing January 1st, 1863, and the present time affords the best time to form clubs for the year. One copy one year.....\$2 00 Two copies one year.....3 00

Larger clubs furnished at liberal rates, or premiums given where clubs of six or more are sent at \$1 50 each. Specimen copies and show bills sent to any one who desires them for examination or the purpose of raising a club. For sale by news dealers generally. For samples or other information concerning the paper, address EMERY & CO., Chicago, Ill.

THE ILLINOIS FARMER.

VOL. IX.

SPRINGFIELD, ILL., JULY, 1864.

NO. 7.

The Illinois Farmer,

DEVOTED TO THE

FARM, THE ORCHARD AND THE GARDEN,


PUBLISHED BY

BAKER & PHILLIPS,

SPRINGFIELD, - - - - - ILLINOIS.

M. L. DUNLAP, Editor.

All business letters should be addressed to the publishers.

 EXCHANGES and all matters pertaining to the editorial department, must be directed to ILLINOIS FARMER, Champaign, Ill., as the editor resides at that point, and is seldom at the office of publication, from which he is distant over eighty miles.

* * For terms see prospectus and special notices in advertising department.

July.

The "heated term" is now at hand, and the sweat from the sun-browned brow of labor must be poured out in copious streams. Harvesting and haying are the order of the day; the corn is being *laid by*, and the small fruits mainly marketed. The sun glows like a furnace and the heated air shimmers and waves in dizzy brightness; the days are long, with short, unquiet, heated nights. When the rain falls it comes in torrents and is quickly licked up by the burning sun. The larger fruits and the grape begin to round up their forms, while the earlier apples are having their rinds pencilled ready for the village and city market.

Farmers often overwork themselves during this and the succeeding month. This is bad policy and should be avoided. Keep out of the dew at night or in the morning. Early rising is all well enough, but Poor Richard's advice to be up with the early bird, will not always pay, especially if you go into the wet grass.

In sharpening your sickle a good sharp file is better than a grindstone. Keep your tools in good order; don't drive yourself or hands, but make every effort count. Fussing around and growling at your hands will not pay; if they do not know how to do their work to the best advantage show them how; be patient and persevering and lay out your labor to the best possible advantage. It is not the farmer who doubles himself up with hard work who accomplishes the most, but the man who works both his brains and his hands.

Comstock's Rotary Spader.

On several occasions we have made mention of this new implement, but until last week have had no opportunity to see it in full working condition; that is, in performing its daily task in that regular way to which all new agricultural implements must sooner or later come to the test of thorough trial.

As intimated in the June No. of the FARMER, the machine was having a thorough trial on the farm of Mr. M. L. Sullivant, near Homer, in this county.

on this subject. You may cross over into Queen Victoria's dominions and you will hear no adverse opinion expressed. Without urging my own claims farther, I appeal to the large number of gentlemen from those regions which I see present." Several members from different places then successively gave their warm commendation of what had just been said, and the chairman was about to put the question on Mr. Baldwin's claims to general public favor, when a person arose in the back part of the hall and said: "Mr. Chairman—I am from the State of Illinois. The fame of Mr. Baldwin has extended to our region of country, and for several years we had employed him in our service. I am sorry to say he has proved an utterly worthless fellow—he has been of no use to us whatever, and we demand that he be utterly banished from our State. We want no more such imposters." Several Western members here sprung to their feet and made the same assertions, some of them not in a very decorous manner.

Mr. Baldwin rose a second time, his face fairly crimsoned with indignation, "Mr. Chairman—I protest against this wholesale denunciation. These western men have not given me a fair chance.—They have, it is true, a deep, rich soil, but it produces nothing but a rank, watery growth, entirely unsuited to my purposes. Their summers are so long and hot as to throw me entirely out of my calculations, and their winters are occasionally so suddenly and intensely cold as to be only fitted for hunters and wood-choppers—no well bred gentleman can endure them." Several western members were about to spring to their feet, when the chairman remarked in a very conciliating manner. "We must not ask too much of Mr. Baldwin. It is evident the West does not suit him—but let him have a fair chance in the eastern and northern part of the middle States, and he will doubtless give entire satisfaction. Now allow me, gentlemen, to introduce a relative of Mr. Baldwin—Mr. King, of Tompkins county." Here the gentleman designated arose and stepped forward. He was somewhat tall and ungainly in appearance, but possessed a fine, large countenance, and, although a stranger to most present, evidently made a very favorable impression. He said he should say but a very few words—although he had given much satisfaction to his employers in Western New York, he was unwilling to promise anything in other places until he had made a further trial of his ability, although he had performed some successful experiments in New England. All he should ask would be that gentlemen from other places should allow him a fair chance, and if he did not come up to the mark he should request the privilege of quietly retiring from their lands, and would ask little for his services. In the meantime he would caution them to make small expenditures on his account, till they had learned whether he was able to give satisfaction.

Several other characters were next successfully introduced; one of them, of fine and promising appearance, but a stranger to most present, the chairman remarked, was known in the neighborhood where he was best acquainted, under the sobriquet of "Ben Davis," but in other places as the Red Victoria, the Carolina Red, the Kentucky Streak, &c., while some of the more intelligent planters preferred to call him New York Pippin.

He only stated that he had never sojourned to any extent except in Southern Indiana and Illinois, and in Northern Kentucky, and experiment only could determine whether he could accomplish much in other places—and the chairman bespoke a favorable notice for him on the part of those present who did not know him before. Another, having a large, noble, clerical appearance, was introduced merely as the "Minister," but he declined presenting himself in any other than in his commercial character; he did not lay claim to high excellence, but thought he could assist the owners of land to large profits. Several members said they did not wish to say anything against the reverend gentleman in his presence, but that they had found, while he made an agreeable impression at first sight, they were rather disappointed on long acquaintance.—However, there was a number from different parts of New England, and some from western New York and Michigan, who asserted that the Minister claimed no more than his real merits, and that they had found him a profitable servant. Another occupant of the platform came forward, with a remarkably pleasant countenance, and was introduced as "Mr. Peck," but was commonly known as Peck's Pleasant; he said he should offer no remarks, but should simply appeal to those who had witnessed his merits for a recommendation. A large number of members from southern New England, New York, northern Ohio and Michigan, expressed their highest opinion of his character, and they had found him a particularly agreeable companion during the early part of the winter; as spring approached he became rather more dull and prosy, and was then eclipsed in company by other claimants, known by the name of Swaar, Red Canada and Northern Spy. At the mention of the latter name there was a call for his appearance from various parts of the house, particularly from several gentlemen of western New York, who showed a little excitement in the matter. He came forward, and at his fine upright, noble appearance there was a strong expression of applause, and at the same time I could distinguish a few hisses.—"The famous Spy of the North," announced the chairman, and the Spy immediately began by observing: "There is no person on this platform that has been more misunderstood than myself. The trouble is, my friends have claimed everything for me, however great the disadvantages under which I may chance to labor; while a good many *fast* people, destitute of patience, can hardly wait a single year for me to make a return of their expenditure. I freely confess that I cannot endure the rough and neglected treatment which my two old friends here on my right, from Roxbury and Rhode Island can bear so well. I have been accustomed to cultivated and civilized life. I cannot endure the banging and jamming which they so commonly receive. And I protest against the hasty feeling which expects instant returns from me. I am strictly American in all my feelings, but I cannot help admiring the slow and sure way of the English, which so well exemplifies the paradoxical but excellent saying, 'to make haste slowly.' Give me time enough, and good and fair treatment, and I will do by you, gentlemen, as even Mr. Baldwin."

To be continued.

—The above, from the pen of J. J. Thomas, can not fail to please and instruct our readers, as it

serves to explain the cause of that wide difference of opinion that exists in regard to the value of varieties.—Ed.

Orchards in Grass—Root Pruning.

We notice an article on "Orchards in grass," published in the December number of the *Gardener's Monthly*, by "Dr. James weed, Muscatine, Iowa," which is certainly worthy of attention.

The writer seems to widely advocate the grass for orchards, with the view of promoting a moderately vigorous growth, as most "likely to endure a severe and trying climate." It is conceded that the fruit from cultivated orchards is larger and fairer, but that from the grass orchard was of fair size and "abundant." He concludes, the impatient ones, "willing to incur the risk of losses from blight and severe winters, will plant in corn and hoed crops." Others who are disposed to be always on the side of safety, and are reluctant to loose valuable trees occasionally when grown, will, we think, prefer grass culture."—The writer claims a further advantage in the cleanness of the fruit when it drops from the tree. He does not say anything about mowing the grass, but leaves us to infer the mowing at least once in the season, else the apples could not be conveniently gathered.

We know clean culture with the cultivator and hoe costs time—and time is money. The grass system is much the cheapest in outlay, and if no other, than two to three years, in the length of time required to bring a young orchard into bearing, and a little inferiority in size of the fruit, comprised the objections to the system, its advocates would rapidly multiply upon assurance of these facts to the public.

The objections named, which seem to be the only ones conceded by the article in question, are not, in our view, the principle ones existing against sowing the orchards to grass. If grass culture is adopted, it must be continued, otherwise the evils supposed to be guarded off thereby, would as certainly follow the introduction of the plow as if the land had been continually cultivated. In this light the evil may be seen in its most objectionable features. All old meadows become hard and sterile, imparting sterility to all crops, not excepting trees, with which the grass roots come in contact, and surround.—These old meadows are a paradisaical nursery for most noxious insects and animals destructive to trees and fruit. Plowing and culture destroy the eggs and nests of the one and the burrows of the other. Bark lice, the destroyer of the tree, as the apple moth is of the fruit, seldom attack to injure free growing cultivated trees, but infest especially those diseased, or from any cause, making a slow growth. If the writer has seen a free growing orchard "fifteen years" in grass, he has the advantage of us. We never did. We never saw one five years in grass, which had not lost at least three of those five years in growth and healthy appearance.

We are free to admit that trees protected at the roots by an aftermath of fine grass, may escape injurious freezing of the roots, which would destroy a subject of clean culture with the roots unprotected in severe winters, during which little snow falls. But this is easily prevented by mulching.

We do not consider the breaking of a few surface

roots with the plow damaging in its effects upon well cultivated trees, but rather beneficial, conducting to fruit-bearing, and checking overgrowth. Some of our best grape growers deprive the young vine of all roots near the surface, when one year in vineyard, to promote these objects. If the vine, with its netting of surface roots, may be benefitted by surface root pruning, why not the apple tree with its perfect system of downward striking roots? This method of root pruning to check overgrowth and promote productiveness, is not of course the best, doing the work roughly and imperfectly. The careful cultivator can, if he will, by judicious root pruning with the spade and knife in mid-summer, check any tendency to a sappy overgrowth, and command the productiveness of his trees. By root pruning he will leave no surface roots to be necessarily broken with the plow, will check late growth and will fruit his trees at any age desirable, and by combining therewith winter mulching, be enabled to grow any hardy variety of the apple without resorting to the exhaustive system of grass culture to check over-luxuriant growth. Such is our view of the matter. If, however, an orchard may be grown and fruited profitably by sowing and keeping to grass, in any part of the Northwest where clean culture with mulching will not do after a fair trial, let us have the facts.—*Homestead Iowa.*

The *London Gardener's Chronicle* says of the Northern Spy apple, in England: "Finer flavored specimens we never tasted of this, the most delicious of United States apples, as well as one of the very finest of table varieties. We prefer it to the best Newtown Pippin."

Poultry.

Management of Poultry.

Almost every family, however poor have or can have its own chickens and eggs. And the following hints will prove useful to all such of your readers as wish to raise chickens successfully.

HEN HOUSE.—Your hen-houses should be roomy, say 16 feet long, 10 feet wide, 10 feet high, where it leans against a stable, barn or wagon shed, and seven feet high at its lower side. And its front face—which should face the south—should have glazed windows on hinges to let in the sun's warmth and light in winter, and for the admission of fresh air in summer. The hen house may if desirable, be built at the end of the hog pen, or over it.

2. ROOSTING PLACE.—The roosting place of your hens should consist of a ladder-like frame, whose slats are about 18 inches apart, that can be leaned against the rear of the house at any desired inclination. As the hens in roosting always occupy the highest places first, this will bring them close together, and keep them warmer in winter. And in summer this ladder may be raised up to a level, so as to keep them farther apart and cooler. The floor should be made of stone, sand and lime, concreted or cemented together so as to form a hard and dry floor and keep out rats. And a few shovelful of dry, pulverized clay sprinkled over this floor every week or two, will absorb all the moist-

six times being placed further apart.— This machine was also drawn by three yoke of oxen. The horse machine had trucks in front and weigh about nine hundred pounds each, trucks included, while the ox spader without trucks weighs about six hundred pounds.— With these latter the work is not as well done, from the fact that the speed of the oxen is not as regular as that of horses. The wide machine, which spades five acres a day, does not appear to require more power to draw it than the other, both having the same number of times to the fork probably account for the apparent discrepancy. A trial is to be made with the horse machine to see if the effect is the same; if so another acre a day will be added to its capacity. The last mentioned spader has worked six days and spaded thirty acres. For twelve days the two ox spaders were put in a gang drawn by the six yoke of oxen driven by one man and average eight acres a day, but they are found to do better singly, and it is not probable unless very short handed that they will be worked together again. The aggregate amount of spading done up to June 1st, inclusive, was five hundred and two acres, at an average cost of seventy-five cents an acre, making a saving of seventy-five dollars on each hundred acres, over the use of the plow. This must be looked upon as a vast stride in the field of progress, and will at no distant day have the effect to cheapen the great farm staples, for it is not so much in the saving of labor as in the increased crop that will be produced by the superior work accomplished.

By the use of the spader the soil is loosened up to the depth of eight inches, without throwing to the bottom the free

potash that has become disintegrated by long exposure to the atmosphere; and which, upon being buried again to that depth, would become fixed and no longer available to the young plants, which must await the slow process of areation to prepare a new supply.

We shall devote another chapter to the subject of areation.

Poetry.

My Brother.

My brother's hands are large and brown,
His cheek has caught the hue,
And yet there beats within his breast,
As tender heart and true,
Fair lady with the lily hand,
As that possessed by you.

My brother is a farmer boy,
And bears no titled name,
Save such as Nature's noblemen,
O'er all the world may claim,
More precious far than gold and gems,
And better far than fame.

That life has other noble tasks,
I willingly allow;
But I prefer my brother's choice,
Whose brown hands hold the plow,
Who earns his portion by the sweat
Upon his noble brow.

I think a brother's love is strong—
A sister's is. I know,
These ties which early life impose.
While years so swiftly go,
Will bind like triple chains the heart,
And must eternal grow.

COUNTRY GIRL.

Correspondence.

The White Willow Controversy.

We have received the following copy of a letter of O. B. Galusha to F. K. Phoenix in regard to the statement of the *Rural New Yorker*, as copied into the *FARMER* last month. We have no doubt that this misunderstanding will all be cleared up, for misunderstanding it must be. That large amounts of swamp willow have been sold, there appears to be little doubt, but that regular nurserymen should send men into the swamps to cut it, is beyond our belief. That they may have been imposed upon to some extent, is more probable. We have no anxiety in regard to the position that the white willow will yet hold in the fence row. Our farmers will soon learn to use strong cuttings, and will make

of it thousands of miles of valuable fence, especially in all low, moist lands, where the osage will not thrive:

LISBON, May 30, '64.

F. K. PHOENIX:—I returned home from the north on Saturday last, and was much surprised and grieved to see the article in the *Rural New Yorker*. I well remember, when on the way to the Fair at Rockford, conversing with Bragdon about the willow speculation, and naturally about the cheats which had been practiced. We spoke of the accusation against you, which I had before on several occasions heard mentioned by different persons, but I *distinctly* stated that I *did not* and could not believe it. Neither Friend B. or any other person can say that I have *ever* mentioned this except (when introduced) to express plainly my opinion of its being without foundation. I neither do or have ever believed the report, or ever given the impression to others that I did so. Friend Bragdon has unintentionally mixed me up with this matter, with those, if any, who are inclined to credit the rumor.

I will write him to-day. I very much regret that such rumors should arise, and *have never aided in any way* their circulation as reflecting against your reputation. I hope you will soon establish your honor in this regard, and that this matter may not prove any serious injury to you.

Yours truly,

(Signed)

O. B. GALUSHA.

Horticulture.

From the Country Gent. The Apple Convention.

A VISION.

As I was sitting one afternoon in my study, (my physician having forbidden the use of my eyes, and my amanuensis having left me for the day,) my thoughts as I sat musing naturally ran over what I had just been listening to—the proceedings of the Fruit Growers' Society of Western New York, the Illinois Horticultural Society, &c. Various objects fitted before my vision in this state of half consciousness—fruit trees—orchards—piles of ruddy specimens—crowds of men engaged in discussion—until, assuming a distinct form, I found myself in a large and brilliant hall with a crowded audience, reminding me of some of the meetings of the American Pomological Society. A large number of persons sat on the platform, many of them rather singular in appearance, mostly with round, ruddy faces, although a few of them bore a decidedly sour expression. I inquired of a gentleman at my side who these individuals were—he told me they were certain candidates to public favor, many of whom considered themselves as having been misrepresented or aspersed by the community, and

that this convention had been called to allow them to present their just claims and to make their defence, and that the body of the convention consisted of orchardists and fruit-growers from all parts of the country. Some of these fruit-growers he stated, felt considerable hostility to a portion of the gentlemen on the platform, and they had come there with the express purpose of having them removed.

On looking about the hall, I could not fail to observe its brilliant appearance—the chandeliers were tastefully hung with beautiful strings and festoons of grapes, while rich hanging baskets were displayed in various directions loaded with fruit. This fruit was arranged with the richest and most tasteful combination of colors I had ever seen—the fine, purple bloom-dusted plums, the crimson of peaches and nectarines, the brilliant scarlet of some of the handsome apples, golden colored apricots and pears, and the various tinted grapes were arranged with a richness of combination hardly exceeded by the colors of the rainbow. The walls were decorated with fine paintings of fruit, views of loaded fruit trees, gardens and orchards, and portraits of several distinguished pomologists.—While I was intently observing these objects, the convention had organized by the appointment of a dignified and venerable gentleman as chairman, whom I discovered at a glance to be no other than the present head officer of the American Pomological Society; and the Secretaries were our excellent friend Charles Downing, and the intelligent and energetic Barry of the Mount Hope nurseries at Roches er

The chairman called the convention to order, and opened the business as follows: "Gentlemen Fruit Growers and Orchardists of the United States—we have met to perform a most important and, I trust, lasting service to the whole American community. My worthy friends whom you see now assembled upon this platform, have rendered to some of you their most valuable services; and I am sorry to learn that in some instances these services have either been unappreciated or else have really possessed but slight intrinsic value. We have met to settle this difference, and, without further remark on my part, I shall proceed to introduce to you the occupants of the platform that they may speak for themselves." With this remark he beckoned to a gentleman who sat near him, who immediately rose and came forward. I was at once struck with his appearance—there was an air of confidence and self-satisfaction both in his step, and the round, healthy, ruddy appearance of his countenance, which indicated that he had long been a recipient of public favor. The chairman announced him as "Mr. Baldwin, from Massachusetts," when he spoke as follows: "Gentlemen, you will bear me witness, or at least many of you will, that for many years, past I have been your best friend. I have enabled you to obtain larger returns from your land, wherever you have employed me in your service, than any other gentleman before you—although I see one of my friends here from Rhode Island, and another from Roxbury shake their heads at this remark—they shall be heard for themselves at the right time. You may travel through the whole length and breadth of the New England States, you may visit New York, and even Michigan, and you will find but one voice

On visiting Mr. S. we found that not only himself but foreman and all hands had spader on the brain. Mr. Comstock the inventor, (not the *ei divant* Prof. of *terre colture*), was present, and it might be that he mesmerized the parties so as to produce the effect so fully apparent.

Note book in hand, with a copy of Daboll in our pocket, or at least a vivid recollection of its pages as conned in boyhood, we were fully armed against any sinister influence from those in charge, with the inventor included.—For two days we gave it a thorough investigation, and are now satisfied that we can speak of it by the card. A careful account has been kept of the work, which will give a very correct idea of the value of the implement in a labor-saving point of view. There are four of these spaders in use on the farm, each of which is in some respect different from the others. We will describe them somewhat at length.

In the first place, the machine consists of a cylindrical cast iron frame, in the ends of which there are slots, in which the cam or forks to which the tines are attached, work. In passing around the drum there is a stationary head or eccentric that changes the relative position of the forks in the slots, bringing them in position to enter the ground at the front, and so soon as they have passed the center, to fold back on the machine. They can also be folded up to pass around the ends of the land, or in passing from one field to another. They enter the ground in a natural projection, like the spade in the hands of a man, and, leaving the soil in the same way, giving it a sudden shake by which it is broken up and left in a fine condition. The lifting and shaking of the

earth behind the machine keeps it in a constant flutter, like the water after a stern wheel steamer.

LARGE FOUR HORSE SPADER.

This spader is three feet long with a cylinder of two feet diameter. It has twelve forks with six tines each. The cut is six and one-fourth inches; that is, the spading tines enter the ground that distance apart. This distance is uniform in all the machines. This machine has been run twenty six and three-fourths days, and had spaded one hundred and sixty acres, or within a fraction of six acres a day; in fact, so near that it might be called six acres.

SMALL FOUR HORSE SPADER.

This spader is twenty-one inches in diameter, has ten forks with five tines each. Being less in diameter the motion is about one-fifth quicker than the large spader; and having less tines it apparently works with less power. In every respect this is the best machine and the one to be adopted for general use. The team attached to these machines traveled at the rate of two and three-eighths miles an hour, which will give for ten hours' work something over the six acres; but there is always a loss of time in turning and stoppages, and the only safe way to get at the amount of work done, is as stated above, taking the performance of several days. To plow an acre with furrow slice of one foot requires eight and a fifth miles of travel, just about what a good team will average in half a day; in fact, unless the lands are half a mile long they will but seldom accomplish this amount, and oftener plow three-fourths of an acre in half a day of five hours. It will be seen that the teams alluded to traveled sixteen and a half miles a day, besides passing around the ends of the

lands and in going to and from their work. We think this is a good average days' work; full as much as can be expected of any good team. A team hauling a load on a solid road will travel more miles in a day; but in plowing we must take into consideration numerous stoppages that take in the aggregate no little amount of time. The teams that work the two spaders are no more than a fair average of farm teams, either as to size or speed, and we therefore think the result will prove a fair average of what may be expected of the performance of the spaders. We have seen various figures and estimates in this connection, some of which make the work an acre to the hour. Doubtless this can be done for an hour, but we prefer the actual showing of a month's work as above.

We should have stated that the small spader has worked twenty-six and one-fourth days, doing the same amount of work as the other; in fact, they both work on the same land and perform the same number of "bouts" each. Here is three hundred and twenty acres, or half a section, spaded with the use of eight horses and two men. They have but to work eighteen days more at the same rate to save in labor the cost of the two machines, four hundred dollars.

THE SAVING OF LABOR.

We see that one man and four horses spade as much in a day as three men and six horses turn over with the plow, making the saving of one team and two men, which will stand thus:

1 day team and man.....	\$3 00
1 day team	1 50
	<hr/>
	\$4 50

Spading six acres at the cost of seventy-five cents per acre:

3 days team and three men.....	\$9 00
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or one dollar and a half per acre; thus making a saving of one-half in the cost of plowing, without taking into account the extra cost of the spader, but this we offset against the cost of sharpening the plow, which expense is not required in the spade tines, as they are self sharpening. The three dollars a day charged is intended to cover the use of team, spader and wages of the man.

The spader pulverizes the soil to the depth of eight inches, while the average of spring plowing for corn is not to exceed four inches. We are not disposed in this connection to speculate on the difference in value of the two modes of preparing the soil, but prefer to leave it to the actual fact of the crop, as seventy-five acres have been plowed and spaded in alternate steps of one hundred and thirty feet wide, an amount sufficient for a pretty thorough test. The saving of labor as stated we do not think can be controverted.

OX TEAM SPADERS,

Two other spaders are used with ox teams. One of these is three feet wide, with a diameter of seventeen inches. The speed of the oxen being slow, not exceeding one and a half miles an hour, the motion of the machine must be regulated by a less diameter. To this machine was attached three yoke of oxen, and in fourteen days had averaged four acres a day or fifty-six acres. Neither yoke of these cattle could have handled a common plow to do good work. This spader had eight forks with six tines each. The other spader was made three feet and eight inches wide, intended for the width of a corn row, to which was to be attached a corn planter. This had not been done, though the idea is not abandoned. This spader has also eight forks but no increase of tines, the

ure of the hen dung or droppings, and so keep the house free from bad odor.

3. BREED OF CHICKENS.—Carefully avoid breeding your chickens from the same stock of fowls, or from fowls closely allied to each other, for this will invariably produce a small, delicate and unprofitable stock, while cross-breeding of choice different kinds of poultry will just as certainly yield you a large, strong, healthy and very profitable supply of hens and roosters.

4. EGG NESTS.—The butter or lard tubs or boxes, procurable at any grocer's, put on shelves raised two or three feet above the floor, at the rear or sides of the hen-house, make the best laying nests as their well-soaked greasiness will keep the hen lice entirely away, as no hen louse can live on or in grease. And hence it would, for the same reason, be well to give the entire roosting ladder an occasional greasing. And the boxes aforesaid should be frequently cleansed and supplied with fresh straw or hay.

5. YOUNG CHICKENS.—As the earliest hatched chickens, provided they have a dry, warm and sun exposed house or coop, free from lice, generally do the best; the hens should be set to hatching about the middle of February or the first of March, but have fewer eggs than common so that they may cover them well and keep them equally warm.—And the young chicks should be kept off the cold ground and out of the wet, and in a dry, warm place, and fed with warm food, until they are old and strong enough to do without warm food. If a setting hen looks pale about the head, it is a sure sign that she is lousy. To remedy this evil clean out her nest, wash her eggs in warm water and grease her under her wings and on her breast and belly, and put her back again and feed her well and she will soon improve and do well.

6. EGGS IN WINTER.—To make your hens lay in winter, they must have a clean, dry and warm house, and be fed on scraps of flesh or unsalted meat, fat, finely powdered bones or oyster shells or refuse lime, green cabbage leaves, &c., and have a proper supply of pure and unfrozen water to drink. Hot Indian corn, buckwheat and oatmeal contain a large amount of heat producing qualities and so form the best winter food for laying hens.

7. GAPES IN CHICKENS.—Holding gappy chickens in or overtobacco smoke until they have inhaled smoke enough to make them sneeze two or three times, is said to be an infallible cure for this disease.

SUN FLOWER SEED.—Chickens are very fond of sunflower seed, which not only fattens them very quickly, but make their flesh very tender, juicy and fine flavored. And so it will be well for you to plant sunflowers in some corner of your grounds for this purpose.—*Rural American.*

Apiary.

Do Bees Injure Grapes?

At a late meeting of the Cincinnati Horticultural Society, this subject received the following attention:

“Mr. Wells said he wished to relate a circumstance about bees. Last winter soon after the very cold weather, he was out in his yard on a mode-

ately pleasant day, and his attention was attracted by the buzzing of bees around his head. On looking up he saw a perfect stream of bees coming from a certain hive of his apiary, and after performing the circuit around his head returning to the hives. This induced him to go and see what the trouble was. On examining the hive he found that all the honey had been consumed, and he concluded that the bees had been trying to convey this alarming intelligence to him whom they looked up to as their natural protector.

“This brought up the general subject concerning bees and the effects of the severe winter upon them. It appeared from various statements made, that a great many swarms were killed by the cold weather. In response to this information, Mr. Sanford said he wished the cold weather had killed them all within a circle of ten miles around Cincinnati.

“Mr. Addis replied warmly to this wholesale denunciation of bees. He said he presumed the remark was made on account of the supposed injury that bees committed on grapes. But the scientific members of the Society, such as Dr. Warder and Dr. Whipple, had assured him that the honey-bee never attacked the perfect grape.

“Dr. Whipple, being present, stated that he was fully persuaded that the honey-bee never made the first attack on grapes. But after the fruit had become punctured by wasps or other insects, then the bees would come and suck the sweet juice from the opening made. Mr. Hodge, living one and one-half miles from him, was a wine-grower, and they both pressed their grapes in a common wine-press. Mr. Hodge would not keep bees owing to the alleged injury they committed on grapes. But when they pressed grapes last fall, it was found that his (Dr. Whipple's) grapes were no more injured by bees than Mr. Hodge's, although he (Mr. Whipple) kept bees, and there were none within a mile and a half of Mr. Hodge's place.

“Mr. Sanford remarked that it was for this very reason that he wanted them exterminated or removed for distance of ten a miles. Ceasing to keep them ourselves was no remedy while our neighbors persisted in keeping them. Our vineyards would be their pasture-ground the same as though we kept them ourselves.

“Mr. A. K. Williams, of Mt. Auburn, said that if the honey-bee did not injure grapes, the bees of a certain citizen in his neighborhood were greatly slandered; for so wide-spread was the opinion among nearly all the grape-growers of Mt. Auburn that the bees of the gentleman referred to, were ruining their fruit, that they had felt like getting up an indignation meeting, and see what could be done in the way of compelling that gentleman to remove his extensive stock of bees from that neighborhood.

BEE ROBBING.—When bees are robbing, close the entrance so nearly that but one bee at a time can escape. At sundown remove the hive to a secure place well darkened, and keep there for a week. This will get the robber bees used to the new neighbors, and they will work and remain with them. This should be done only when the swarm is overcome by the robbing bees. Otherwise leave the swarm on the stands, with the entrance hole nearly closed. In such a condition they will fight their way through.

TREATMENT OF BEE STINGS.—Many persons suffer so little from bee stings, that they fear them no more than mosquito bites, and this is usually the case with our most successful apiarians. Others suffer severely: the slightest sting produces large swelling and great pain. In such cases, Dr. Latour proposes the following treatment: 1. To pull out the sting, which generally remains in the wound. 2. To bathe the place with ice-water, or else acetate of lead or ammonia. 3. To apply an impenetrable coating of collodion, rendered elastic by the addition of one-tenth part of castor oil, whereby the production of heat in the living tissue is prevented and inflammation avoided.

Miscellaneous.

From the Country Gentleman and Cultivator.

Beer Measure.

It is somebody's duty to protest against the introduction at this time of a new measure under an old name, called "*Beer Measure*." There is not a single good reason for its introduction, and as there must be *some* reason for any change so radical and extensive as that sought to be effected by the change referred to, it follows that the reason must be a bad one—not unsound merely but morally *bad*. In short there must be some *thimble-rigging* about it.

Now this is pretty plain talk, says the *beer-measure* man. Yes, sir, and it is meant to be. It is an occasion that demands plain talk, and I have been waiting for somebody to say it for a year past, but as no one has said it, I can satisfy my conscience no longer.

I suppose that some good old people who studied Doboll thirty years ago, will open their eyes and inquire if there is not ample authority for saying that there is a wine measure of 231 cubic inches to the gallon, and a beer measure of 282 cubic inches? If there are any such, then let them be informed that the laws of the United States recognize but one gallon, which consists of eight lbs. of pure water at 60 degrees of Fahrenheit, and with certain other conditions that insure accuracy. The State of New York also has a statute gallon which is just the same in quantity, and both are the old English wine gallon of 231 cubic inches. It is not the present imperial and legal gallon of Great Britain, that having been altered by act of parliament from both.

That is the law and gospel of gallons. "Whatsoever is more than these cometh of evil."

Suppose one of our cheese factory men who talk so much about beer measure, should in one of his visits to the great city to look into the market, chance into front street to buy some stores for his family. He inquires the price of sirup—say Stuart's extra sirup. "Well, \$1 25," says the bland salesman. "All right," replies Oneida Co., "as far as the price goes, but I always buy by beer measure." "Beer measure?" asks the grocer. And I know what else he would say. He would say, "Friend, we are considered sharp in New York, but we can't keep even with you. I would advise you to go over to the North river side; they will

accommodate you with any kind of measure you want over there." [I hope my North River side readers will pardon this expression; they will recognize the naturalness of the remark.]

Oneida county would begin to feel ashamed of himself by that time, and possibly inquire why measures that are good enough to be used in all the transactions of 30,000,000 of people, from the measure of brandy at \$10 the gallon, down to cider or vinegar at 31½ gallons to the barrel, is not good enough to measure milk with?

I tell you, gentlemen, there is *thimble-rigging* about it. It is not square. It is not honest. Somebody is to be cheated.

Don't blame the editors of the *Country Gent.* for printing my plain talk. I have written a good many pages for their paper, and I never offended anyone before, but here is a case that demands plain talk. The honor of the profession demands that all this nonsense about beer measure should be dispensed with. It demands it for two reasons: 1st. It is a falsehood—there is no beer measure. 2d. It is illegal.

You may make all the contracts you please and stamp them with all sorts of stamps, and seal them with all sorts of seals, and there is not a court in New York State that will enforce a contract for a beer gallon. They will tell you that the word beer is tautological, but that gallon is gallon, and consists of eight pounds of water or a certain well understood fraction of milk above that—say 8½ lbs., which is near the truth.

I will relate one incident appropos to this, and I have done, for I believe in short sermons. Some years ago two men called upon me, and announced their business as of a peculiar and personal nature. A lawyer who thought I knew more about milk than he did, had sent them to me for advice. They were brothers-in-law, and one of them had bought the other's milk for the preceding summer, and had worked it up with his own into cheese. A price had been agreed upon by the gallon, but when pay-day came the buyer raised objections to the seller's bill. He had discovered as Daboll and some absurd modern copyists of Daboll who made school books, say, that the beer gallon consists of 282 cubic inches, and that according to the authority quoted, this measure was used also for milk [!] and other coarse articles! and so he wanted to throw off 51 gallons from every 285 of his brother's bill.

What my advice to these brothers were may be inferred. I never heard how they settled it, but I hope that honest counsels prevailed. TRUTH.

COFFEE AND TEA CULTURE IN CALIFORNIA.—The cultivation of coffee and tea promises to become an important business in California. One nursery at Sacramento has over five thousand coffee plants on trial, and it is believed that there will be no difficulty in bringing up the plant to a standard of hardiness to weather the mild winter of that climate. Near the Mission Dolores several thousand tea plants have been raised during the last year. The tea plant is grown in China and Japan very extensively in latitudes corresponding to all California, and the San Francisco journals think there can be little doubt that it will be cultivated hereafter, for household purposes at least, on every farm in that State.

REMEDY FOR BONE AND BLOOD SPAVIN.—Here-with I send you a recipe for a blistering ointment which I have tried with success both on blood and bone spavins, and many other ills that horse-flesh is heir to. I have found it a very valuable remedy, and one I would not be deprived of for a great deal—it is perfectly safe, does not prevent the growth of hair, nor require that the animal should rest under its application. Pulverized cantharides 1 oz; oil origanum 2 oz; Venice turpentine 4 oz; oil sassafras 2 oz. Soak well and apply freely on the spavin. One or two applications will cause a sore, and it will be necessary to desist until it heals, when the application must be renewed, and repeated until cure is effected. The remedy is perfectly safe, and will be effectual if persevered in.—*Cor. Rural N. Yorker.*

ABOUT SHEEP.—We find more Merino sheep upon hills than others; and that is the place for them. They are short nibblers and good little climbers. A large sheep ascends a hill with more difficulty, and has a larger mouth. Such a sheep, like cattle, you want on a rich, level, or rolling soil. Our prairies are fitted exactly for such a sheep. But, then, the Merino will do equally well here. For wool, let us again urge the Merino; for mutton, the long-wooled. The South Down is a hardy sheep and an excellent nurse, which is an excellent point. The Leicesters (we are now speaking of the long-wooled) are more delicate. The Oxfordshire seems to combine most of the desirable qualities of this kind of sheep. It does well for wool, well for mutton, and well for raising lambs. It is the best for a general sheep, where but one kind is kept.

THE USE OF LIME.—Lime may be used instead of manure, as it has nearly all the properties of manure. It is one of the most efficient aids the farmer has. But it cannot always be used, because it is not always found in the locality, and to transport it from a distance, makes it costly.

Let farmers, then, always bear in mind that lime is a manure; and let them bear another thing in mind, that lime has properties valuable to the farmer which manure has not. Lime sweetens your sour, wet soils; it is an enemy to sorrel; it adds mealiness and sweetness to potatoes and roots: it strengthens and brightens the straw of your grain, which lodges the less in consequence; and it lasts for years without a renewal.

A hundred bushels of lime to the acre, on soil that never has been limed, is the general rule. But often much more is used, and oftener much less—too little.

CROUP.—Dissolve half a teaspoonful of ipecac, in half a tea cup of warm water. Sweeten it, and give a half or a whole teaspoonful, according to the age, until vomiting is produced; then give it in smaller quantities, and less frequently. Wrap up the child to promote perspiration, bathe the throat with volatile liniment, or tobacco ointment. The above will give relief in a short time, if taken in season. Onion juice and molasses may be given to vomit, but there should be no delay. It is known by a peculiar whistling sound in the breathing, and if neglected at all, proves fatal.

ILLEGAL SALE OF GAME.—An interesting case was before the New York Common Pleas Court a few days since. It was that of *Lawrence vs. Farrington*. An appeal from a judgment of \$120 obtained against the defendant, a market man on Broadway, near Twentieth street, by the plaintiff, who is a member of the New York Sportsman's Club, for exposing for sale two dozen quails contrary to law.

The grounds of appeal were that the law for the preservation of game, passed April 23, 1862, was unconstitutional, as it creates a penalty for the possession of merchandise; also that it being shown that the quails exposed for sale were killed in Illinois, the penalty should not apply in this State.

The court held the law to be constitutional, it being deemed necessary for the preservation of birds to make the possession of them as well as the killing, illegal, and that the defendant must show that the birds were killed in Illinois at the time when it was not illegal to kill them by the laws of that State.

CUTTING AND CURING CLOVER.—Clover should be cut immediately after blossoming and before the seed is formed. It should be cured in such a manner as to lose as little of its foliage as possible, and therefore cannot be treated exactly as the natural grasses are. It should not be long exposed to the scorching sun, but after being wilted and partially dried, it should be forked up into cocks and left to cure in this position. The fourth or fifth day, when the weather is fair and warm, open and air it an hour or two, and it will then be fit to cart to the barn.

Clover cured in this way without loss of its foliage, is better for milch cows and for sheep than any other hay. It may also be fed to horses that are not hard worked, or to young stock, but it is most valuable for cows in milk. For other farm stock it is worth from two-thirds to three-fourths as much as the best hay.—*Manuel of Agriculture.*

SMOKY CHIMNEYS.—A correspondent of the "London Builder" gives the following cure for a great and common evil:

"A smoky chimney and a scolding wife are two of the worst evils of domestic life, says an old proverb, and to obviate the first evil, ingenuity is ever racking its brain. Hence, Regent street and every part of the metropolis has its house tops bristling with pipes, and deformed by cowls of every conceivable variety. Now, I have built many chimneys, in all possible situations, and found one simple plan everywhere succeeded, the secret being only to construct the throat of the chimney, or the part just above the fire-place, so small that man or boy can barely pass through it. Immediately above the chimney should be enlarged to double its width, like a purse, to the extent of about two feet in height, and then diminish again to the usual proportions. No chimney that I ever constructed thus, smoked.

GIGANTIC AUSTRALIAN TREE.—In a gorge on the declivity of the Mount Wellington range, near Tolloso, about six miles from Hobart Town, a tree of the blue gum species was found to be 84 feet in circumference.

VEGETABLES FOR CATTLE.—All kinds of vegetables, such as carrots, turnips, potatoes, &c., when offered as food for cattle, should be sliced or bruised. Many valuable animals of the bovine species die, accidentally, in consequence of devouring greedily, and without mastication, one of the above vegetable productions; occasionally, however, an unmasticated apple is the cause of the difficulty.

In view therefore of preventing the accident of choking, which results from swallowing a substance too large for the capacity of the esophagus, or gullet, I advise husbandmen to slice, bruise or grind the same; for when a large foreign body of the above kind becomes firmly lodged in the gullet it cannot easily be removed without endangering the life of the animal.

The primary act of mastication in cattle is not of a very thorough character; the stomach is often called upon to perform labor which properly belongs to the teeth; the old story is, that the domesticated bovine is an indifferent masticator, and the act is a careless affair; therefore all food of the above character should be artificially prepared.

HOW TO MAKE A STOCK POND.—A subscriber sends us the following: "Select a site near the head of a ravine (clay soil), so that the natural surface of from one to three acres will drain the water to it. Scoop out sufficient soil to form a dam, at least three feet wide on the top, with sloping sides inside and out. The depth of the pond if five or six feet, will be sufficient to support any ordinary farm stock the year round. An open tube of plank one foot square and eight feet long, placed near the top of the embankment, will carry off the surplus water."

HOGS EATING GRASS.—To see a large hog in a rattling yoke, eating grass, reminds one of old-fashioned times. An improvement has taken place. Now and then we find porkie eating his grass in the pen, where his economical master has carried it to him. It will do you good to see him (porkie) moving his tail (thinking he has one,) and satisfiably take his grass with the rest of the grass-eating world. The grass should be cut when short and tender, and when moist. The dew on is a good time. The hog will lose no flesh on grass alone; improve with a little addition of milk, refuse of the kitchen, &c. The grass comes in opportunely when food happens to get short, as is sometimes the case, especially when milk breaks off in August and September.

BEANS.—The cheapest and most nutritious vegetable used for food is beans. Prof. Liebig says that pork and beans form a compound or substance peculiarly adapted to furnish all that is necessary to support life. A quart of beans and a half pound of pork will feed a small family for a day with good strengthening food. Four quarts of beans and two pounds of corned beef, boiled to rags in fifty quarts of water will furnish a good meal for forty men.

MAKING BUTTER IN WINTER.—A farmer's wife says in the *Homestead*, a little salt stirred into the milk occasionally, while setting, will prevent the white particles of curd so frequently seen—an excellent thing, if true.

CARE OF SHEEP.—The best authorities say to most diseases may be kept off by care and good feeding. We see no reason to dispute this. People who afford good shelter in winter for the sheep, even if the winter is favorable, and good feed the year round, are never troubled with grub in the head among their sheep; at least we never found it prevalent. It is wonderful how good feed fortifies; and good shelter and attention are feed virtually. The humane man who has intelligence will see to these things. Keep the grub out of the head by putting grub into the stomach, says Dr Dadd.

TO STOP BLEEDING ON MAN OR BEAST.—A Kemper, Ross county, Ohio, writes that bleeding from a wound on man or beast may be stopped by a mixture of wheat flour and common salt, in equal parts, bound on with a cloth. If the bleeding be profuse, use a large quantity, say from one to three pints. It may be left for hours, or even days, if necessary. In this manner he saved the life of a horse which was bleeding from a wounded artery; the bleeding ceased in five minutes after the application. It was left on three days, when it worked loose, was easily removed from the wound, which very soon healed.

TO FREE MOLASSES FROM ITS SHARP TASTE.—Take twenty-four pounds of molasses, twenty-four of water, and six pounds of charcoal, coarsely pulverized; mix them in a kettle, and boil the whole over a wood fire. When the mixture has boiled half an hour, pour it into a flat vessel, in order that the charcoal may subside to the bottom; then pour off the liquid, and place it over the fire once more, that the superfluous water may evaporate, and the molasses brought to their former consistency. Twenty-four pounds of molasses will produce twenty-four pounds of sirup.

APPLE MOLASSES.—Take new sweet cider, just from the press, made from sweet apples, and boil it down as thick as West India molasses. It should be boiled in brass and not burned, as that would injure the flavor. It will keep in the cellar, and is said to be as good, and for many purposes better than the West India molasses.

A GOOD RECIPE FOR VINEGAR.—Take forty gallons rain water, one gallon molasses, and four pounds acetic acid. It will be fit for use in a few days. Acetic acid costs twenty-five cents per pound. This is the recipe by which most of the cider vinegar is made, which is sold in the country stores.

GINGER SNAPS.—Take two cups molasses, one cup lard, one tablespoonful ginger, one teaspoonful salt, two teaspoonfuls soda. Let these ingredients boil up once, and then add flour until stiff enough to roll out, and bake in a quick oven.

WEeping OAKS.—The most distinctly pendulous oak is *Quercus pedunculata pendula*, a very lively tree, combining grace with majesty. The weeping Turkey oak, *Q. cerris pendula* is a great beauty.—*Gardener's Weekly*.

The Best Time to Sow Grass Seed.

I have an impression that experimental knowledge is the most valuable for the farmer. For more than half a century I have been experimenting to find the best time to sow grass seed. For more than 30 of the first years of my farming, I did as my neighbors did; we supposed that the spring months were the only proper ones for that purpose. But later in life, by reading agricultural papers, I discovered that some enterprising farmers were successful in sowing their grass seed in August or September. I tried the experiment with complete success; that being the season it would naturally fall, it appeared evident to my mind that it was the right one. But still later I have not been particular, and have sowed grass seed at any season when my ground was prepared to receive it, and if the seed was good it has uniformly vegetated and done well.

Last fall we (my son and myself) after harvesting my potatoes from the low, wet soil, which would not admit of seeding down in early spring, sowed herds-grass and red top seed on the 14th and 15th of October upon said potato field, doubting, but still hoping for the best; and now the 8th of July, it bids fair to give us the best crop of hay produced on any of my farm lots. This grass probably will require two weeks longer to grow than that which has been seeded down longer. I think I never saw seed vegetate better at any season. Grass seed will vegetate a long time after being sowed. In the spring of 1862, I seeded down a lot of good ground, but rather dry, with red-top seed; the months of June and July were uncommonly dry and at the middle of August there was no appearance of a grass sprout on the piece. On the 10th of August, the same year, it began to rain profusely and continued raining for several weeks till the ground was saturated. In September, more than four months after the seed was sown, every seed seemed to vegetate, and the ground appeared like a beautiful lawn. And on the whole, I have concluded that any time when our land is in a good state of preparation to receive the seed, is the best time to sow it.—*SILAS BROWN, in Boston Cultivator.*

West Virginia.

The Parkersburg *Gazette* has the following account of the natural resources and attractions of the new State of West Virginia:

The largest portion of the State of West Virginia is diversified with hills, and much of it is mountainous; but nearly all is adapted to some species of profitable agriculture. Yet the main value of this large tract of country will ultimately be found in its extraordinary mineral wealth and its capacity for manufacturing.

In proportion to its territory it is superior, as an agricultural field, to Massachusetts or Western Pennsylvania, for all purposes of manufacture, we far surpass either. With all the water power either of them possess, our climate gives us better use of the power, and it has, beside its streams, the most abundant supplies of coal for steam power, and iron in immense quantities.

But the great wealth of this State is in its minerals, which are abundant beyond conception. The product of petroleum oil as a source of wealth, is scarcely yet in infancy. Wells are often bored,

yielding from one to two hundred barrels a day, and the oil is daily sold upon our wharves at eight dollars a barrel, the cost of which with the present low water, is not over four dollars. A well is now equal to a mint that makes its own gold. There is in the Eastern markets a demand still greater than the supply. A question arises in some minds whether the supply of this oil will continue. It is inexhaustible, and all the evidences bear us out in the hypothesis that it is neither an animal nor coal product, but formed of interior gasses, as coal is formed, constantly being upheaved to the surface by the action of those gasses, and slowly discharged through the rock fissures, and there lying until the pump comes for it. It is in the power of the pump to raise faster than the supply; but our whole earth for a hundred miles around us is filled with these seams of oil, and while one is being exhausted another will be filled.

Undoubtedly oil is among our richest sources of mineral wealth, but there are others of no small magnitude. In the vicinity of the oil wells lead has been discovered, evidently in sufficient quantities for profitable mining. The ore has been analyzed by competent men, and yields 80 per cent. of pure lead. This is equal to the Galena mines, and we have no doubt they will be profitably worked.

There are thousands of acres of iron ore that is as rich as can well be worked, yet there is not a furnace in the whole territory. It would forever have remained so had we not been relieved from the oppressions of Eastern Virginia. Professor Roffers was employed eight years in a geological survey of the State, and what is now West Virginia proved so rich in minerals that the contemptible politicians of the East refused to publish this report because the West would thus become known and populous, taking the power from the East.

GOOD MILKERS.—It is an easy matter to distinguish a good milker. The farthest removed from the bull the better. As the male has no milking properties, and the female is devoted to them; and none so much as the cow; so we are to judge from this principle.

No person of ordinary intelligence would select a cow with thick neck, heavy bones and a bull-like disposition. On the other hand, the true cow, the good milker, is easily known by its thin neck, sometimes almost amounting to deformity (the case with one of ours); small bones; thin, sensitive hide; thin tail; and, most of all, a mild, placid disposition, showing absence of animal heat, which consumes, or prevents milk from forming. A quiet, motherly face, denoting intelligence and domesticity, is what is wanted. The reservoir of milk, of course, must be large, or there cannot be stored a large quantity. A large, well-formed bag, therefore is a necessity. A small udder is an invariable sign of a poor milker. The form and size of a cow are not always to be depended upon. The disposition is perhaps as much, if not more, than any other one point; some say than all other points. We remember a heavy-headed, coarse-bodied cow, but with the mildest of dispositions, as one of the best butter makers we know. A good eater, always healthy. She made during the month of June 15 lbs. of the best butter a week; and gave a good flow of milk nearly the whole year round. Avoid the bull, and seek the farthest opposite qualities for the best milker.

LANGUAGE OF INSECTS.—A most singular discovery, the credit of which appertains, we believe, to Mr. Jesse, is that of the antennal language of insects. Bees and other insects are provided, as everybody knows, with feelers or antennæ. These are in fact, most delicate organs of touch, warning of danger, and serving the animals to hold a sort of conversation with each other, and to communicate their desires and wants. A strong hive of bees will contain thirty-six thousand workers.—Each of these, in order to be assured of the presence of their queen, touches her every day with its antennæ. Should the queen die or be removed, the whole colony disperse themselves, and are seen in the hive no more, perishing every one, and quitting all the store of now useless honey, which they had labored so industriously to collect for the use of themselves and the larvæ. On the contrary, should the queen be put into a small wire cage placed at the bottom of the hive, so that her subjects can touch and feed her, they are contented, and the business of the hive proceeds as usual. Mr. Jesse has also shown that this antennal power of communication is not confined to bees. Wasps and ants, and probably other insects, exercise it. If a caterpillar is placed near an ant's nest, a curious scene will often arise. A solitary ant will perhaps discover it, and eagerly attempt to draw it away. Not being able to accomplish this, it will go up to another ant, and by means of the antennal language, bring it to the caterpillar. Still, these two, perhaps, are unable to perform the task of moving it. They will separate and bring up reinforcements of the community by the same means, until a sufficient number are collected to enable them to drag the caterpillar into their nest.

MEN WHO MISTOOK THEIR CALLING.—Mr. Charles Mathews made his first appearance in the character of a student of architecture. Ben Jonson was an apprentice to a brick layer, and then enlisted for a soldier, before he set up as a wit-combattant with Shakespeare, and fell out with Inigo Jones, who was associated with him in the production of the fanciful court masques of his day, and before he was a member of the club Sir Walter Raleigh founded, and wrote that song, "Drink to me only with thine eyes," that lies like a loose pearl among his more lengthy works. James Cook, the navigator, instead of running away to sea like another Robinson Crusoe, was apprenticed to a small country shopkeeper, who, however, detecting the wistful glances the lad cast towards the ocean, returned him his indentures. As a reverse to this example, enacted within remembrance Clarkson Stanfield, R. A., went to sea, instead of turning his steps straightway to a studio. Mr. Charles Dickens and the younger Disraeli both mistook their roads on first setting out in life, thinking a lawyer's office lay in their right paths. Barry Cornwall fell into the same error, Mr. Thackeray likewise lost his way at first and tarried in Rome, studying as an artist. David Roberts, R. A., climbed the ladder that led to his present elevation from the level of a house-painter's apprentice, with an interval of noviciateship spent as a scene-painter in Drury Lane Theater. Mr. Ruskin coquetted with the brush before he took up the pen, as vigorously as Bishop Colenso attacked algebra before he distinguished himself as a theologian.—*Builder.*

ANOTHER NEW SILKWORM.—Most of our readers know that a few years since the French introduced a silkworm that feeds on the allanhus, and that it has been so successful that a very large area in South France and North Italy is now covered with allanhus orchards (so called), and that the silk produced from it is becoming quite an important article of commerce. Recently the Director of the Society of Acclimations communicated to the Academy of Science at Paris the fact, that Mr. Simon had sent from Japan the eggs of a silkworm that feeds on the oak. That from eighty-three worms hatched, seventy-seven cocoons were obtained; that the only feed was the common oak; that they commenced spinning on the first of June and ended on the 25th; that the cocoons are the size of those of the mulberry worm, and as easily reared; that the silk is as fine, is stronger, but not quite as brilliant. The Japanese name for the worm is Yama-mai, and the Director thinks this worm the most important one yet found.

THE OLDEST ROSE TREE.—A botanical as well as an archæological curiosity is seen now at Hildesheim, in Germany. Ancient legends connect, if not the foundation of the city, at least the foundations of its see, by the Emperor Louis the Pious, the son of Charles the Great, with a certain wild rose tree, which is supposed to have stood in its present place on the cemetery of the Dome long before even those days. Although documentary evidence as to its existence in Charles the Great's time is wanting, it is yet distinctly mentioned in a document of Bishop Hezilo, who in 1078 carried a fence around it. There is no doubt whatever that it is the oldest rose tree in Europe; and for centuries it has attracted the attention of naturalists in a high degree. But the most extraordinary circumstance is this, that two new shoots have come out of the root in the course of this summer, the one of which has already reached a height of twelve feet, and its diameter measures no less than an inch near the root. There is an interesting account of this tree in Mr. River's invaluable "Rose Amateur's Guide."

PROFITABLE SHEEP.—E. A. Parks, of St. Johnsbury, Vt. says;

"I keep about 100 sheep. The flock was at first of the Leicester breed. I have two rams of that cross that will weigh 200 lbs. each. They have yielded fleeces of 13 lbs. each. My whole flock generally averages 4½ lbs. washed wool. My flock last year gave me 6½ lbs. of wool per head, unwashed, and raised 100 lambs from 98 ewes. The sheep brought me in about \$4 50 per head last year, and would have done as well this year if I had not sold till now. I have my lambs come in April or last of March; keep them under sheds, and give them what good hay they will eat, and give them grain when they first come to the barn. About the first of March I commence giving them grain, and continue it till they go to pasture.—When the hay crop is short I give them grain all winter. I have sometimes bought in Boston the second quality of beans, when they could be had cheap. It is a good plan to give sheep some browse through the winter, and give them sulphur in their salt occasionally and let them have good water as they want it."

Advantages and Disadvantages of Cheese Factories:

One of the most intelligent and experienced dairymen in the State of New York, Mr. X. A. Willard, of Little Falls, briefly enumerates the advantages of cheese factories thus: "The advantages claimed for the factory system are superior quality, uniformity, higher prices, saving by buying at wholesale such materials as salt, bandage, annatto, boxes, etc., and finally, relieving the farmer and his family from the drudgery of the manufacture and care of cheese." That these claims are just there can be little doubt, and they certainly go very far to commend the establishment in question to public attention and favor. It is easy to see that a factory superintendent, thoroughly understanding his business, giving his entire time and attention to it, and having every facility for doing things in the most approved manner, is likely to produce an article of cheese far superior in quality to that made, under many difficulties, it may be in the farmer's family. No doubt, with special care, as fine an article of cheese can be made by the individual farmer as by the factor but it is an unequal contest, in which the obvious advantages of the factory must have their influence. Cheese manufactured in small parcels varies much in quality, and to command a good price, it is necessary to have the quality as uniform as possible. The factories have already established for themselves a reputation in these respects which secures for their products the highest price in the market. The produce of single dairies is always bought by large dealers with an allowance for unequal or imperfect cheese. But it is affirmed by competent judges that an aggregate of one hundred thousand pounds of factory cheese is frequently so uniformly excellent in quality, that the most practiced eye can scarcely detect any difference in the manufacture. It is said that factory cheese sells at a price above that of single dairies equal to the whole cost of manufacturing. In November, 1862, good cheese of family manufacture sold from ten to twelve and a-half cents per pound, while Oneida factory cheese brought fourteen cents, and the larger sizes, weighing from 700 to 1,000 pounds each, brought in some cases as high as seventeen cents per pound. A better price, too, can be afforded by the wholesale dealer for the factory made article, because less time, trouble and expense are consumed in the purchase. It is as easy to buy the produce of six hundred or a thousand cows as that of a "twenty cow" dairy, so far as time and trouble are concerned. Passing over the saving effected in the materials used in cheese-making, it appears to us that the relief afforded by the factory plan to the farmers wives and daughters is an important consideration. This argument is even more weighty in Canada than in the United States, where the men assist in dairy operations more largely than is the case in this country. Here the entire burden rests on the female members of the family, and many an overtaxed wife and mother finds the care of her dairy a very serious addition to her toilsome household duties. That eminently practical medical writer, Dr. Hall, in an article on the health of farmers' families, expresses the opinion that "many a farmer's wife is literally worked to death, in an inadvertent manner, from want of reflection and consideration on the part of her husband;" and Mr.

Willard, whom we quoted at the outset of this article, says: "It is believed, and we speak advisedly, that the old method of cheese-making has done more to injure the health of women in cheese-dairying districts than any other cause." He styles this the most important advantage to farmers in this union arrangement, and adds: "It would be difficult to estimate this in dollars and cents," since the value of life and health is not to be thus computed.

The drawbacks connected with cheese factories are chiefly these: the difficulty of detecting adulterated milk; the trouble of carrying it to the factory; the danger in hot weather of its becoming sour; the difference in the quality of milk, arising from the manner in which cows are fed and managed; and, finally, the loss of the whey. It is evident that a dishonest person furnishing a large quantity of milk could easily add a portion of water, and thus increase the amount paid or credited to him.—No effectual mode of readily detecting such admixture has yet been discovered. Some cases of this sort have been found out, and the dishonest persons have been summarily expelled from the association, and have justly become objects of contempt among their neighbors.—We see not why such dishonesty is not punishable by law. If not, it ought to be. The daily delivery of milk at the factory, at a regular hour, is doubtless attended with trouble; but the question is whether that trouble be not well repaid. As to the liability of the milk to sour, extra care and cleanliness in all the vessels used in milking, straining, and carrying to the factory will effectually prevent this. The loss of the whey is regarded by some as an important item, but the thorough manner in which the work is done at the factory, is said to lessen very much the value of the whey, while of course, it increases the yield and profits of the cheese.—On the whole, therefore, the advantages of this system would seem greatly to outweigh the disadvantages, and we cannot but wish to see the cheese factory become a popular and prevalent institution in Canada.—*Canada Farmer.*

How Tastes Differ.

REAMIR relates, on the authority of M. de la Hire, that young French lady could never resist the temptation of eating a spider whenever she met with one in her walks. They are said to taste like nuts, at least this was the opinion of the celebrated Maria Schurman, who not only eat them, but justified her taste by saying that she was born under Scorpio. Latrille informs us that the astronomer, Lalande, was equally fond of this offensive morsel. Man is truly an omnivorous animal; for there is nothing which is disgusting to one nation that is not the choice food of another. Flesh, fish, fowl, insects, even the gigantic centipedes of Brazil, many of them a foot and a half in length, and half an inch broad, were seen by Humboldt to be dragged out of their holes and crunched alive by the children.

Serpents of all sorts have been consumed as food, and the host of the celebrated inn at Terracini frequently accosts his guests as politely "requesting to know if they prefer the eel of the hedge or the eel of the ditch." To evince this attachment to their favorite pursuit, most natural-

ists seem to consider indispensable to taste and recommend some insect or other. Darwin assures us that the caterpillar of the hawmoth is delicious; Kirby and Spencer think the ant good eating, and push their entomological zeal so far as to distinguish between them the flavor of the abdomen and the thorax; and Reamir recommends the caterpillar of the plastic grama as a delicious dish.

How much we eat, and upon how much we might live, are curious matters of speculation, and in an article on the subject in an English Review, we find the following suggestive facts:

The accounts which travelers give of the quantity of food which can be consumed are extraordinary. Sir John Ross estimates that an Esquimaux will eat perhaps twenty pounds of flesh and oil daily. Compare this with Valentin's six pounds, or with Canaro's twelve ounces of solids and fourteen ounces of wine. Captain Parry tried, as a matter of curiosity, how much an Esquimaux lad, who was scarcely full grown, would consume, if left to himself, weighed the following articles before being given. He was twenty hours getting through them, and certainly did not consider the quantity extraordinary:—Sea-horse flesh, hard froze, four pounds four ounces; do. do. boiled, four pounds four ounces; bread and bread dust, one pound and twelve ounces. To this must be added one and a quarter pints of rich gravy-soup, three wine glasses of raw spirits, one tumblerful of strong grog, one gallon of water.

Captain Cochrane, in his "Journey through Russia and Siberian Tartary," relates that the Admiral Saritcheff was informed that one of the Yakutis ate, in four and twenty hours, the hind quarters of a large ox, twenty pounds of fat, and a proportionate quantity of melted butter for his drink. To test the truth of the statement, the Admiral gave him a thick porridge of rice, boiled down with three pounds of butter, weighing together twenty-eight pounds, and although the glutton had already breakfasted, he sat down to it with great eagerness and consumed the whole without stirring from the spot. Captain Cochrane also states that he has seen three Yakutis devour a reindeer at a meal, and a calf weighing about two hundred pounds is not too much for a meal for five of these gluttons.

Some caterpillars daily eat double their weight in food; a cow eats forty-six pounds daily, and a mouse eats eight times as much, in proportion to its own weight, as is eaten by a man. But when such facts are cited, we must bear in mind the enormous difference in the nature of the food thus weighed, their relative amounts of water, and the indigestible material. The same caution is requisite in speaking of a man's diet.

Oxen and Horses.

The enormous waste of horse-life by our armies, both North and South, affords material for serious consideration to stock raisers, and farmers generally. According to Gen. Halleck's official report, our cavalry average a new set of horses every two months! We do not know what proportion of them are entirely used up, but from what we can learn, we presume that at least one half of them are killed or die outright, while the other half are

mostly permanently disabled for such service. Of the latter, perhaps one half may with ordinary care, be able to do an average amount of farm work for some years to come. But few of them, however, will ever find their way back to New England, or the West, from which they were taken; so that, for all practical purposes, we may safely calculate that none of the thousand horses taken from our farms for the army, will ever return.—Their labor is entirely lost to our farmers.

Prices of all kinds of stock and produce must rule high for a long time to come, but this enormous consumption of horses must inevitably exert a double pressure in regard to them, and we desire to call the attention of our farmers to the important points connected with the subject.

This scarcity of horses, and consequent high prices, will stimulate the breeding of horses for some years to come, and our farmers may be certain that colts will pay better than ever before. As manual labor will also be high, it will generally be for the interest of farmers to raise those things which require the least of it; and in this view, the raising of colts has some decided advantages. Each one however, must be his own judge as to whether colt-raising may be profitable under his circumstances.

The second point to which we wish to call attention, is in relation to the employment of oxen, in place of horses upon our farms.—There are but few farms on which oxen may not be kept with decided profit. A yoke of oxen can be bought for the price of a good horse, can be kept almost or quite as cheap; will do nearly double the work on a farm; and if carefully used and well fed, will sell, after the crops are all in, for a profit over their cost. There are but few farmers who could not easily realize a profit of thirty or fifty dollars a year by purchasing oxen in the early part of the winter, and selling again the next fall, or early winter. By generous feeding, and careful usage, they will give a net profit on their growth, besides doing work enough to pay for all they eat. We know farmers do realize a profit of fifty to one hundred dollars a year, by adopting a similar course to that we have recommended.

Our object at this time is merely to call attention to these two points, which seem to us to be deserving of the serious attention of our farmers generally. The question of the comparative cost of horse and ox labor, is one of greater importance than is generally supposed, and at another time we may consider it at greater length. Meanwhile, we should be pleased to hear from our farmer readers upon this subject.—*Mass. Plowman.*

ILLINOIS CHICORY IN THE N. Y. MARKETS.—The market is firm, but has been quiet since our last. 5,000 lbs. handsome American Root brought 11c cash. We have been permitted to examine a sample of the American Chicory, above alluded to. It is much clearer than the foreign, being entirely free from mould, and was raised in Cook county, Illinois, by Messrs. Floto & Co. The soil of that section is said to be admirably adapted to its cultivation, and Messrs. F. & Co. have conclusively demonstrated, during the last four years, that it can be produced on our Western prairie lands in unlimited quantities.—*N. Y. Shipping List.*

Department of Agriculture Report—What it is to Contain.

The Washington *Chronicle* gives a list of the names of articles, and their authors, that are to constitute the next report of the Commissioner of Agriculture. It says:

‘The Report will contain about forty essays on a variety of subjects of present importance. The initial article is a description of the American aspects of the International Exhibition at Hamburg, by D. Needham, of Vermont.

The natural capabilities and industrial development of the Northwest are exhibited by J. W. Hoyt, of Wisconsin; of West Virginia by J. R. Dodge, of the Department; and of Minnesota, by O. H. Kelley, of Minnesota.

The animals of the farm very properly deserve attention, in view of the excessive demand for wool and meat, and dairy products, and the martial consumption for horses and mules. Francis Morris, of New York, furnishes an excellent article on breeding Cavalry Horses; John Strohn, of Pennsylvania writes of the Conestoga horses. The merits of Ayrshire cattle are judiciously canvassed by Sanford Howard, of Massachusetts. Articles on Sheep Husbandry, by H. S. Randall, of New York; ‘Sheep and Wool,’ by J. R. Dodge, of the Department, who has also a review of the dog law question, with statistics of dog depredations; ‘Cashmere Goats,’ by J. S. Diehl, District of Columbia; ‘Hogs and Pork Packing,’ by H. D. Emery, of Illinois; ‘Distribution of Neat Cattle,’ by L. C. Loomis, D. C.

E. A. Samuels, of Massachusetts, furnishes an article on the ‘Animals and Birds of New England;’ T. Michener, of Pennsylvania, on the ‘Insectivorous Birds of Chester County;’ and D. Colven, of Maryland, on ‘Bees and Bee Culture.’

There is an interesting illustrated article on ‘Fruit,’ by F. R. Elliott, of Ohio; a sketch of ‘Cranberry Culture,’ by E. B. Phinney, of Massachusetts; ‘Strawberry Culture,’ by George H. Hite, of New York; ‘Wine Making’ and ‘Silk Culture in California,’ by Wilson Flint, of California.

An exhaustive review of cheese dairying, of great practical value, is from the pen of S. L. Goodale, of Maine.

A concise and careful review of tobacco growing is taken up, L. J. Bradford, of Kentucky; also a treatise on hemp; of ‘Flax,’ by J. R. Dodge, of the Department; and of ‘Teasles,’ by R. Mosest, of New York.

Another of those sensible essays of Dr. Hall, of New York, so admirably designed to embrace the health, comfort and happiness of the rural population, is found in ‘Farmer’s House.’

Mrs. Adams, of Michigan, offers suggestions about ‘Farmers’ Boys;’ while Simon Brown, of Massachusetts, gives country homes additional cheer in improved ‘Farmers’ Gardens; and Ruth Hall, of Illinois, adds ‘House Flowers’ to their other attractions.

William Saunders, the accomplished gardener, makes his report which is replete with valuable suggestions. T. Glover, the indefatigable entomologist, writes, in popular style, of insects, and the means of their destruction; and L. Bollman, statistical clerk, makes his report upon the statistics of production. An interesting paper on farm ma-

chinery is given by M. L. Dunlap, of Illinois; a sketch of the origin of the ice crop, by L. Wetherel, of Massachusetts; a comprehensive notice of the sorghum manufacture, by William Clough, of Ohio; and a general outline of the geography of plants, by J. S. Lippencott, of New Jersey. T. H. Liverett, of New Hampshire, gives directions for ‘root culture.’ There are articles also on meteorology, coal oil in West Virginia, &c.

A NEW ENTERPRISE.—A factory for making cheese is being erected in Bloomingdale by H. B. Hills, which we learn is nearly ready for operation. The plan proposed we understand, is for the farmers to associate dairies, and bring their milk to the factory twice a day, thus saving much of the labor usually performed when each dairy is supplied with fixtures, besides making a much better quality of cheese. He has facilities for making into cheese the milk of three hundred cows. This plan of cheese making has been adopted in some of the Eastern States with success, and we see no reason why it will not prove a profitable branch of business here.—*Northern Illinoisian*.


COFFEE.—Let your coffee stand five minutes after the cream and sugar are mixed with it; then drink, as then the ingredients are all united, and you have coffee, and not before—before, you have a mixture of cream, sugar and coffee, tasting of each—not so when united. Time improves coffee, both in the raw bean and when browned, and when poured out. Remember this, and improve your coffee.


SMALL BATTER PUDDING.—1 Pint of milk or water, 1 teaspoonful of soda, 3 of cream of tartar, 3 eggs. Dissolve the soda and cream of tartar in a little of the milk or water. Butter size of an egg, add a little salt, mix as thick as pancake. Steam one hour, and do not lift the lid during the hour. Fresh fruit improves it. Serve with sauce.

SUBSTITUTE FOR COFFEE.—To one quart of wheat bran add one teacupful of molasses with one of water, stir together, and dry in the shade, or in a stove; brown a dark color, and mix one-third coffee, which, if prepared right makes excellent beverage.

DISEASES OF SHEEP.—For the foot rot the *Irish Farmer’s Gazette* gives the following simple remedy: Pare the foot, removing all the jagged and loose bits of horn, and annoint with butter of antimony. Repeat every second or third day, according as the feet are more or less bad.

THE BLACK THORN FOR FENCES.—A correspondent of the *Valley Farmer* has become thoroughly convinced, from experiments made, that the common Black Thorn, which grows wild in our woods and prairies, is peculiarly adapted for fencing.

 A good glue is prepared by dissolving common glue in vinegar to the consistency desirable for use. It will keep for a long time.

 Barley was found in the mountains of Himalaya.

On Churning.

A talented Frenchman once wrote a pamphlet upon the proper manner of blowing out a candle; and I suppose the reader will consider his book and the heading of this article to be parallel cases, and exclaim, "why, everybody knows how to churn." But I think a careful examination will show that everybody does not know how to churn, or rather how to produce butter from cream, or we should have less growling from the 'gude wife,' because the butter would not 'come.' All who have had any experience in the matter know the apparently perverse nature of butter. At times it will come, that is, separate from the buttermilk, in a few minutes, and sometimes it will not come at all. This and many other curious facts may be made clear by a little careful investigation in the matter, which, with thy permission, friend editor, I propose to make.

The butter exists in the cream in the form of minute globules surrounded by a thin film of casein, and to obtain the butter we must first break the film. This may be done in two ways, either by agitating it or beating it. There are several conditions which influence the time required for separating the butter by churning; and if these are thoroughly understood and complied with, there will be little or no trouble in getting butter to come. The main and most important condition is the temperature of the cream when it enters the churn: there seems to be a certain medium established, and it seems to make but little difference whether the temperature of the cream is above or below it, there will still be the same trouble in breaking the casein which envelopes the globules of butter. The cream when poured into the churn should not have a higher temperature than 50 deg. When put in at this temperature, it will rise from 5 deg. to 10 deg. during the operation of churning.

Another important condition which does much to influence the time required for separating the butter, is the state of the cream when it is put into the churn; if sweet it will require much longer than if sour—and it is an established fact that before butter can be made the cream *must* be sour, and if it does not reach this state before it goes into the churn, it must and will afterward, or no butter will be obtained. Some of those who always take the premium at the county fairs, always churn sweet cream to obtain it, and I have often had this thrown into my teeth when advocating the above doctrine, but that does not controvert my argument, for before the butter separates it does get sour.

A thermometer hanging in the room where the cream is kept will indicate the temperature of the cream at the time, and this may be either raised or lowered to about 54 deg. after it goes into the churn, by adding cold or hot water, as the case may require, *while the churn is in motion.*

The time occupied in churning has a great effect upon butter, and also upon the temperature of the cream in the churn; if the cream is at 55 deg. when put into the churn, very fast churning will raise it too high, and soft light colored butter will be the result, especially in warm weather; in cold weather the motion should be faster, in order to keep up the proper temperature. I have known entire churnings to be thrown into the hog tub because one or two of these necessary conditions

were not complied with. Even when the churn fails to separate the butter, we have one unfailing agent left in the form of heat, which never fails to burst the casein, but will not produce an article fit to be called butter—but it can be put to uses known to every good housekeeper.

Some are in the practice of churning the whole milk; in this case it should have a temperature of at least 65 deg. before going in the churn.—*Dairyman, in Germantown Telegraph.*

From the Country Gent.

Ducks—Rural Scenes.

The duck possesses many excellent qualities. They were great favorites with the ancients from the mildness and simplicity of their character, from their great fecundity, laying a great number of eggs, for the cheapness and ease with which they are provided for. The feathers of the white sort are nearly as good as those of the goose.

They are the most industrious of all fowls and we have often gazed on them with admiration to see them sputter in shallow and dive down in deep water.

The inoffensive and harmless character, the social and conversational qualities of ducks render them not only pleasant but profitable animals to keep, and the contrast between them and chickens, in their nature and habits, is much in their favor. Of the kind and social nature of the duck, the following is related by Mowbray;

We had drawn off for the table the whole of a lot of ducks, one excepted. The duck immediately joined a cock and hens, and became so attached to them that it never quitted their company, notwithstanding some harsh usage, particularly from the cock. It would neither feed nor rest without them, and showed its uneasiness at their occasional absence by continued clamor.

We once had an individual of the crested variety, which, after losing its mate, would keep with a few particular fowls during the day, and at night when the fowls went to roost, she would follow up the stairs on to the second floor, and sit as near the fowls as she could get. But after we had placed a few of the large African geese in the yard, she left the hens and contracted an intimacy with the geese, keeping constantly with them.

The manners and actions of the duck, whether upon land or water, are both curious and pleasant to contemplate. Their regular afternoon parade and march in line, the older drakes and ducks in front, from the pond homewards, is a beautiful country spectacle, to be enjoyed by those who have a relish for the charms of simple nature. A parcel of ducks which have been accustomed to their liberty, were for some particular reason shut up for several hours. On the door of their house being opened, they rushed out, threw themselves into rank and file and marched with a quick step three or four times round a certain space, constantly bowing their heads to the ground, then elevating themselves and fluttering their wings, the ceremony finished they quickly adjourned to the water. We have laughed a thousand times at the conceit with which our boyish imagination was impressed, namely, that the act we had witnessed was nothing less than a duckish thanksgiving for their deliverance.

C. N. BEMENT.

Horticulture.

[From the Co. Gent. and Cultivator.]

Summer Treatment of the Grapevine.

It is now very generally admitted that the grape is the most certain in its annual crops, the most productive and the most profitable of the American fruits. The apple, pear, plum, peach, cherry, &c., produce their fruit from buds grown the preceding season, and are therefore subject to all the casualties resulting from severe cold in winter, and from early and late frosts of spring; while the grape is produced on wood of the current season's growth, and is seldom injured by frost. Indeed, like the strawberry, it is the most certain of all the fruits. There must ever be an unlimited demand for good grapes, and at fair prices. A knowledge of these facts has within a few years past led to extensive planting of the vine in almost every section of the country, and during the last season there has been an immense number of vines planted, probably more than all that have been planted in the six previous years. Some have planted many acres for extensive vineyard purposes while thousands of others throughout the land who own but a single house lot have set one, two, or perhaps half a dozen vines where perhaps little else could be grown, but which will furnish a supply of fruit for a family for several weeks. Many of these persons who have gone quite extensively into the planting, have no practical knowledge of the proper treatment of the vine, and have been content to follow their neighbors who knew but little more than themselves. Evidences of their lack of care of the vine are to be met with all through the country. There is nothing intricate in the training and treatment of the vine, but there is a requisite system, and that must be followed from the beginning, and it is at the start that most inexperienced cultivators fail. When this is the case the only proper remedy is to cut back the vine, whatever its age, to the ground and start anew. Vines when planted are generally produced from cuttings, layers, and what is termed single eyes. This last is the most extensive method of propagation now, and when well conducted makes good vines; but vines from well grown layers are the strongest, and come into bearing soonest — Vines when well grown are best when planted at one year's growth. Plants from single eyes, when not strong, may be root pruned and transplanted for a second year's growth in the nursery, but beyond this no vine is improved by greater age before setting in the vineyard, and all vines, when permanently planted, whether of but one or more year's growth, are treated the same during the first summer. I had taken up this subject in an article for the *Country Gent.* before the close of the planting season, but it was cut short by illness, and what would then have been said will in part be somewhat out of season now. Yet if the error which is most common to inexperienced planters has been committed, it is not altogether too late to remedy in part.

The natural habit of the vine is to extend itself onward and upward, wherever it can find proper support, as we find them in the forests extending their arms to the tops of the tallest trees, in search of the light and heat of the sun. The object of the vine-dresser is to secure all the advantages that are thus derived from the sun, and at the same time keep the vine subject to his own control, near the earth. There are various methods or forms employed for training the vine, as circumstances or convenience may require, all, however, securing the same important end, viz., keeping the vine within its proper limits, and at the same time keeping up a supply of strong, well matured bearing wood of the previous season's growth. Plants, as generally sent out by regular propagators, are cut back to about one foot in length, leaving from four to eight eyes to each plant. If the planting is done before there is danger of "bleeding," it is well to cut back the vine to about *three* good eyes, or if the planting is after March, it is well to rub off the upper eyes, leaving three. After these start, secure and tie up the lowest strong one, and remove the other two. The single cane is all that is required the first year, and all that should be permitted to grow. It is here that great error is liable to occur with many; they let every shoot grow, and instead of securing a single strong cane they have half a dozen weak shoots, neither of which will make a bearing cane for the next crop. Where this error has been committed, the only remedy at the present advanced period of the season, is to pinch back the ends of all the shoots, except the lowest and strongest. This should be kept constantly tied up to a suitable stake. Whether the shoots have been reduced to a single cane at the proper time, or whether they have been neglected, the one that is now selected as the cane for the following year, the laterals should be kept pinched back throughout the season. These laterals spring from the base of each leaf, and, in order to secure all possible strength to the main cane, these laterals are stopped after the third small leaf has been formed, removing two of them; the one being left to mature, which if removed might have a tendency to injure the bud at its base, which it is important to preserve to fill its office the following year. These side shoots or laterals will start a second or perhaps a third time, and should as often be pinched back, leaving each time one leaf beyond the last pinching. Securing the greatest strength to one main cane, and keeping the laterals shortened and the vine well secured to stake or trellis, constitutes the chief treatment of the vine the first season after planting, always, of course, keeping the ground clean and mellow. The winter pruning and the subsequent treatment of the vine, is governed in some degree by the method of training which is to be adopted. These may form the subject of another chapter at some future period. — Many other important points would have been alluded to, could the subject have been reached at the beginning of the planting season. H. P. B.

Canning Fruits.

Mr. Quinby, of St. Johnsville, N. Y., supplies for the Canajoharie Radii the following:

Although the practice of canning fruit has recently become quite common, there are some few who are not sufficiently familiar with the process.

This method of keeping it should be encouraged till all understand and practice it, instead of wasting a pound of sugar to a pound of fruit, cooked to an indigestible compound, in order to preserve it. To say nothing of its superior flavor and healthiness, the difference in the cost of sugar in these times is an item worthy of some consideration.

The whole secret of success lies in expelling all the air contained in the pulp of the fruit, and then sealing hermetically to prevent its return. Glass bottles or jars are better than tin, as the fruit can be inspected at all times; and, in case of failure to shut out all the air, the incipient stages of fermentation can be detected, and the fruit used before it is entirely spoiled. Many of the patent jars are very good, and but little trouble. Common plain bottles with a good sized neck will answer every purpose.

A cement is made for sealing by melting and stirring well together one pound of rosin and one ounce of tallow. Instead of simply coating the cork of the bottle with this—which is frequently enough—it is safer to make a paper cap one inch deep, just a little larger than the top of the bottle, into which is poured a spoonful of cement, and a bottle ready corked is inverted directly into it, and left standing until cold. Into the top, or rather bottom, of this cap should be put a piece of paste-board, tin or thin piece of wood, cut to fit. Patty pans, when they can be had, are very good for this purpose, or any similar thing, even an old saucer. To prevent breaking, the bottles should be heated gradually. It will do to put them in cold water and then bring it to a boil. Where much is to be done, it is less trouble to heat by steam. Have a vessel of tin or wood, sheet-iron bottom, and three or four inches deeper than the length of the bottle. They should stand on some strips of wood to keep them out of the water, which may be two or three inches deep. A close lid completes the steamer.

All kinds of fruit may be put into the bottles cold, and sufficiently heated in them. But many kinds are much quicker done by cooking in a porcelain or *clean* brass kettle, and transfer boiling hot into the cans through a tunnel.

Rhubarb is the first thing in season to claim attention. It should be stewed and the bottles filled while hot. The cork should fit close, and as it is pressed in all air bubbles should be excluded from under it. Cut off even with the top, wipe dry, and insert into the cup of cement, and leave to get cold. If no cup of any kind to put it in can be had, the top must be dipped into the melted cement, and held in cold water to harden. This should be repeated, unless the first coat is very perfect.

Strawberries come next. They should be just ripe and fresh picked. Put them in whole, and cover with sweetened water. Heat till they shrink near one-half in size, when they are ready to seal up. If the bottle lacks just a little of being full, put in some hot water. Raspberries and blackberries are put in the same way. Perhaps some kinds will need less sugar—one pound to a quart of water—and will not shrink quite so much.—Cherries should have the pits removed, sugar added without water, scalded thoroughly, and then put into the bottles and managed as the rhubarb. Apples are also stewed ready for the table, bottled and put away for next year. Peaches, pears, and sometimes tomatoes are cooked in the bottles, in

order to save the bottles whole. Tomatoes are saved with the least expense of any fruit. They do not require any thing added, not even salt. They should be ripe; scald and remove the skin, and then stew before putting them into the bottles. When the cooking commences they will swell out; but after it is continued long enough they shrink somewhat, when they may be put into the cans for sealing. Tomatoes contain a great deal of juice, and with proper care to prevent burning, much of it may be evaporated before canning. The cellar is the best place to keep it.

Spading vs. Plowing—Corn Culture.

Within the past ten years many attempts have been made to introduce a machine to spade or fork up the soil instead of plowing it in the usual way, but until very recently without any practical results. It is well known that land spaded or forked over always produces better crops than that plowed and otherwise put into as fine tilth, but the reasons therefor have not been so apparent.

In the cultivation of winter wheat, the summer fallow has been found of great value, and in the culture of spring wheat, autumn plowing; or the sowing on the stubble of hoed crops without plowing, has been essential to success. No practical farmer expects to grow a good crop of spring wheat on land plowed in the spring; and no one expects a good crop of winter wheat on land that has been cultivated in tobacco or a crop of wormwood; nor would it be obtained from a meadow that had been turned over to the depth of ten or twelve inches by trench plowing; corn will not grow well after buckwheat and but indifferently after potatoes. These facts have become patent to most farmers from actual experience, while the reasons therefor have not been well understood. It cannot be that the spade more finely comminutes the soil than the plow, harrow and roller; and yet we must concede that the crop is always better, that plants thrive more vigorously in the spaded than in the plowed land.

We know that the facts alluded to are stubborn ones, and constant in their stubbornness, we may therefore consider them as fixed and beyond hope of change.

While spring wheat will not stand up and fill out on spring plowed land, oats, on the contrary, will make a good crop. Land for tobacco undergoes a sort of summer fallow, the plants not being set until the beginning of summer, having been plowed early in spring and fully exposed to the atmosphere by subsequent stirrings.

When we look over the list of plants, we can, by the aid of the chemist, class them so as to know how to treat them, or rather how to prepare the soil for them. All plants containing much potash, such as wheat, corn, barley, tobacco, etc., require the following treatment:

OF POTASH.

All clay and clay loam soils contain potash.—This is mixed in the soil, having once composed a part of the rock from which the soil has been formed. This potash when below the surface is in a fixed state and insoluble in water, but by exposure to the air becomes dissolved and is then in a condition to unite with the soil (*silica*) which it dissolves, forming silicate of potash, (*soluble glass*), which forms the coating of all the small grains, the grasses and the stalks of corn. Without this coating these plants will not stand up and

the grain cannot be formed. As it requires time to disintegrate the potash, any preparation of the soil that does not effect this will prove disastrous to the crop. It is difficult to conceive any condition of our prairie soil, in which more or less of potash at the surface is not in the proper condition for assimilation for the growing plants. In the case of the corn crop the quantity at the time of planting is abundant for the young plant, but the soil should be frequently stirred so as to give it thorough areation. In this case the alkali is rapidly developed, and the result is a large crop.

With the small grains the case is different; the surface not being stirred after seeding, the quantity of potash is not increased as in the case of the hoed crops, and hence a different course must be pursued.

In plowing, the soil is inverted and the free potash, that is that portion which has become areated, ready for assimilation with the plants, is buried so deep that it in turn soon becomes fixed and unfit for the plant, and these must await the slow process of a new supply. Hence we may reason that deep plowing in the early part of the season is not to be recommended; a fact that is verified in practice. For this reason sub-soiling is more valuable than trench plowing. The stirring of the soil to a great depth is always advantageous, while the inversion of the surface has a contrary effect. Spading or forking over the soil has the effect to mix its several strata; and while giving it deep tillage retains the potash in the proper condition for the use of plants. The usual depth of plowing in the spring is four inches. This depth would not affect the potash, but it is so shallow that the series of downward roots cannot penetrate the soil so as to secure an abundant supply of moisture.—Nearly all of our grains have two series of roots—one set that go down, which might be called tap roots, and the other surface roots. In Indian corn the later roots start out above the surface at the time of tasseling and spread over the surface at a rapid rate. These roots absorb the potash and which form the outside coating of the stalk, and if the supply is abundant, the crop makes rapid progress, and the ears fill out in the same ratio.

Here we have a solution of the value of the summer fallow. All hoed crops are in fact a summer fallow to the land, so far as regards areation and the disintegration of the mineral elements of the soil. The rains that carry the ammonia to the roots of plants, has free passage through its finely comminuted surface, and are retained for present and future use. The fact is that in most cases a surplus of material for plant structure is laid up during the summer fallow of the hoed crops, which makes

such land so desirable for the small grains. Spring wheat and barley have long been favorite crops on such land. Oats, requiring less potash, are liable to grow too rank, and hence are found more safe to follow the two former. It will thus be seen that spading will have an advantage over plowing in many cases, giving deep culture without disturbing the surface or areated soil so wisely prepared by Nature for the seed bed.

For the turning under of green crops, of rubbish and of sward land, the plow gives promise of long continued usefulness, while for old land in good condition the spader must come rapidly into use. In another place we have shown that it reduces the cost of plowing one-half, a very important item, and one that carries great weight in a direct appeal to the farmer's pocket. Another advantage that the spader has over the plow—it *always scours*, nor does it require sharpening, as it is self sharpening. If a tine becomes bent or broken it is easily repaired or replaced by a new one, and we need have no delay in running after a blacksmith.

With the old strap plow and bull tongue, thirty to forty acres was a good season's work, with one team. Let us see how this was done. In this part of the State we have April and May in which to put in the corn crop. Generally we have in the two months forty working days with the plow—sometimes more but often less. With the old strap plow, an acre and a half was a good day's work. We had then—

FOR FORTY ACRES,

26 days plowing, 6 days harrowing, 3 days laying off, 3 days covering; 38 days with team. Add to this, the laying off and covering having been done with a single shovel or bull tongue, required an extra hand for six days. The dropping was also done by hand at the rate of eight acres a day, making the account stand thus: 28 days men and team, \$47; 11 days one hand, 75c, \$8 25; total \$55 25, or \$1 38c an acre; all with labor at half the present rates. Let us take a view of the same work done with the spader:

FORTY ACRES SPADED,

6½ days spading, \$3 per day, \$20; 6½ days extra team \$1 50 per day, \$10; 3½ days planting and rolling with combined roller and planter, \$10 50; total, \$40 50; making a saving over the old mode, with cheap labor, nearly fifteen dollars; yet this is but a part of the advantage. The difference in the condition of the land for after culture, and the increased crop thereby, are not to be overlooked.

THE SULLIVANT MODE OF CORN PLANTING.

To M. L. Sullivant, of Broadlands, near Homer, in this county, is due the credit of the greatest improvement in corn culture; and it is not detracting

from others who have aided in the good cause.—While others have been content with partial improvement, Mr. S. has swept the field and taken a stand that places him in the van of corn growing.

We will simply detail what we saw. In one field was two of Comstock's rotary spaders, run by eight horses and two men, spading twelve acres a day; a planter followed, depositing the seed in the freshly stirred land; and this followed by a roller, pulverizing and packing the soil on the seed, which will insure a speedy germination, even under this trying drouth. Here we have six teams and four men putting in the crop at the average rate of two acres a day to the team, or three acres to the hand. With a Craig planter attached to the roller one man and team would be further saved. This corn will need three workings, which at eight acres a day, will be four and a half days to the twelve acres; or ten and a half days to the twelve acres, being less than a day to the acre. Taking twenty working days to the month for the corn crop, and counting April, May and June, we have seventy acres to the team, with one hand to spare to other work for twelve days. Two hands on the farm with two teams, one spader, a Craig planter and roller and two two-horse cultivators, and the two would put in and tend one hundred and forty acres and have twenty-four days' work of one hand to devote to gardening and other work. If this is not progress within the past twenty years in prairie culture, we are at a loss to know what would be progress.

By this mode the cost of corn is reduced to a low figure, and one that must to some extent astonish our down east cousins. Will they heed it, and leave the corn field to the farmers of the western prairies, or will they dig out the stumps and stones and follow us in the field of genius—the use of brains in farming?

Alton Horticultural Society.

FRIDAY, June 3, 1864.

Seven o'clock being the appointed hour, the Alton members left the lime kilns on board the eight horse power steamer, Slowboy, at 8:45, and moved in a mysterious way up and along the Illinois shore of the Mississippi. The sky was blue, the river bright, and the bold shore wore the softer green of early summer. The speed of the boat was not too great to prevent a thorough, scientific, æsthetic or horticultural observation of the bluffs, as well as of sun-loving turtles, brooding ducks and crows, stalking solitary on the sandbars, after the Virgillian type. Touching at Dr. Hull's and Mr. Riehl's, where new accessions to the party were

made; the Slowboy arrived at Eminence before (the passengers') dinner; and after partaking of an excellent cold collation accompanied by superior samples of strawberries and cream, the passengers were ready to join the overland members and organize for business, at 3 o'clock p. m., President Hull in the chair.

The minutes of the last meeting were read and approved.

The Secretary reported that he had purchased, according to instructions, for the use of the Society, a microscope of Paris manufacture, magnifying about one hundred diameters, at a cost of six dollars. Also a letter from Dr. Benj. D. Walsh, of Rock Island, stating that he could furnish a collection embracing about 100 families of insects, arranged in a case, for \$15. Mr. Huggins stated that he had found such a collection very useful and instructive, and offered to furnish his own, also made by Mr. Walsh, for the use of the Society; the offer was accepted with thanks.

Also a circular of the American Pomological Society, inviting all kindred associations to send delegates to the biennial meeting to be held at Rochester N. Y., on the 12th of Sept. The Secretary recommended that the Alton Horticultural Society arrange to send delegates in order by sending a strong delegation and from all parts of the west to secure the next meeting at St. Louis or some other western city and also to gain information concerning new and untried fruits. The subject was passed over for the present.

Isaac Snedeker, J. A. Barr, and Dr. Buffington of Jerseyville, and J. M. Fay, Dr. Roberts and Geo. H. Colby, of Alton, were elected members. Col. N. Niles and G. C. Elsenmayer, of St. Clair county, were elected honorary members.

An essay on "Parlor and window gardening," read by Mr. J. W. Schweppe was highly commended by members and requested for publication.

REPORTS OF STANDING COMMITTEES.

The Committee on Entomology reported "the receipt of a variety of insects from various members, among which are a very fine specimen of the Cecropia, from Master Frank Starr, injurious to vegetation but not found here in sufficient quantity to be very dangerous; the Lady-bug, which as a destroyer of hurtful insects, should be preserved; and the Carolina, May-bug, and army worm moth, which are all destructive to vegetation."

FRANK STARR,
F. CURTIS,
W. C. FLAGG,

Dr. Hull exhibited a specimen of Curculia, caught in the act of depositing her eggs in the fruit of the Strawberry, for want of a more congenial

fruit, J. E. Starr recommended that this being the month most abounding in insects, each member should carry a vial in his pocket and bottle up all new interesting specimens. Had found difficulty in killing them, a Cecropian moth was not affected by chloroform and beat himself to pieces. Dr. Buffington recommended Prussic Acid as infallible.

The Committee on Fruits and Synonyms are of the opinion that of the Strawberries exhibited the best varieties are McAvoy's Superior and Longworth's Prolific, presented by Dr. Hull; Hooker's Seedling, presented by J. M. Day; rank next, being large and fine. The Scarlet Magistrate, by Jas. Newman, is excellent. Wilson's Albany, by Dr. Hull, is too well known to require any notice. The Jenny Lind, by Mr. Reihl, is acid and said to be very late. (?) The Iowa and Warner Seedling (?) exhibited by Dr. Hull and the Baltimore Seedling, by Mr. Reihl, were the other varieties exhibited.

The Whitesmith Gooseberry, by Mr. McNair, is large and free from mildew. Very good.

The Newtown Pippin, by A. & F. Starr, and the Gilpin by Mr. Flag, are sound and in a good state of preservation.

The Governor Wood Cherry, is presented by A. & F. Starr; not quite ripe. Respectfully submitted.

GEO. C. EISENMAYER, Ch'n.

N. NILES, Sec.

A special committee on wine consisting of Messrs. Eisenmayer, Johnson, Schweppe. J. E. Starr and Judge Niles, reported on two bottles of Catawba of 1863, exhibited by Dr. E. S. Hull.—“The Committee find this wine to be of good body. It would have been a number one Catawba had it been preserved in a cool cellar. They regard the grape from which it came as of a first rate quality. Respectfully submitted.”

GEO. C. EISENMAYER, Ch'n.

EMINENCE, JERSEY, June 3.

To the Alton Horticultural Society :

The committee on Trees, Plants and Flowers, in accordance with the instructions given at the May meeting, notified the members of the Society that a Floral Exhibition would be made at the June meeting, at Mr. J. E. Starr's place, Eminence, Jersey Co., Ill. Bouquets and collections were requested. A display highly creditable is the result. Of cultivated varieties, a bouquet No. 1, with the following card attached: “Presented by Mrs. David E. Brown,” contained the greatest variety, and is very elaborately and skillfully constructed. The flowers were contributed from the gardens of Hon.

Robert Smith, Dr. Marsh, Samuel Wade, Esq., Isaac Scarritt, Esq., Mr. E. P. Wade. Arranged by E. P. Wade.

A bouquet No 2, by Mrs. H. N. Roberts, of Alton, is little inferior in variety to No. 1, while in construction we regard it as equal to the best.

A bouquet from Dr. Hull's grounds, contained a magnificent Calceanthus, and an Oleander, which was quite rare, and many other choice flowers, which entitle the offering to special mention.

Mrs. Dimmock presents a beautiful collection roses and pinks in variety.

Mrs. Newman's bouquet contains the greatest variety of roses.

Mrs. Frank Starr brought us a large collection of Peonies in variety.

In originality and exquisite taste, in combination and arrangement, a basket of wild flowers by Mrs. Ellis, crowns the collection. No one but she who collected and combined the material and made the arrangement, should attempt a minute description of this basket.

A collection of wild flowers, by Mrs. A. H. Draper, of Alton, bespeaks industry and good taste, for which she will please accept the thanks of the committee.

Respectfully submitted,

MISS ANNA H. ROBBINS,
MRS. F. CURTIS,
J. E. STARR,
S. B. JOHNSON,
JAS. NEWMAN.

The Committee on Vegetables, through Mr. D. E. Brown, Chairman, reported on exhibition a very fine lot of Asparagus from Mr. Tucker, the best of the season.

The Secretary reported bi-monthly reports of March and April, received from the Commissioner of Agriculture, which were distributed among the members.

J. E. Starr introduced specimens of roots of the Delaware, grown on the grounds at Eminence last season, four feet and over in length.

GRAPE PRUNING AGAIN.

Mr. Eisenmayer, of Mascoutah, St. Clair county, being called upon, said he had so far modified his practice as to do almost no summer pruning. In spring he leaves the Catawba with two canes and about six eyes to a cane for fruiting. The Concord and Norton, as also Cassady and Taylor's Bullit, will endure twice that amount. But instead of rubbing off laterals in summer pruning, as recommended by the books, he permits them to grow at will. The best fruit of the Concord and Norton's Virginia grows on the laterals; tops the vines with a sickle in August to ripen the wood perfectly.

In planting puts the vines in the bottom of deep holes and fills up gradually by cultivation. Thus the ground is warmer about the newly set roots, and the cut-worm, which works at the surface is foiled. Lays down this year's growth for layers about the first of July. Regards such layers as good almost, as from old wood. Plows ground twenty-four inches deep by a sub-soil plow following common plow and bringing the sub-soil to the surface.

J. E. Starr believes that letting the lateral grow may produce a stockier and stronger plant.

Dr. Hull would permit laterals to grow for fruit. This year his Catawbas are producing fruit on the laterals, when the true fruit buds are killed. Rubs off the two leaves next the main stalk, as he believes they are competitors with the fruit. Rubs outgrowth at fruit joints for the same reason.—Would plant vines and all fruits deep to avoid the effects of drought and the too sudden effect of moisture after drought upon the fruit. The growth of tree and fruit, when planted shallow, is checked and incited with injurious rapidity.

Mr. Huggins presented sections of peach trees that had passed through the winter of 1855-6, and of trees grown since that time. The first showed a distinct ring of rotten wood about that season from which younger trees were free. Also sections showing a new growth of the present year, already made over the discolored wood killed by the freeze of January 1st.

The place of next meeting was referred to the Committee with power to act.

It was voted in case the day appointed for any meeting prove stormy, the meeting be held the succeeding day.

Present at this meeting, Messrs. E. S. Hull, J. E. Starr, J. A. Barr, Geo. R. Colby, F. Curtis, J. Curtis, D. E. Brown, J. Huggins, J. Snedecker, Dr. Buffington, S. B. Johnson, Dr. H. N. Roberts, Rev. Mr. Johnson, J. M. Day, C. Merriman, H. G. McPike, Jas. Newman, N. Niles, Geo. C. Eisenmayer, Mr. Tucker, Holmes and others. Also Mrs. Starr, Fearson, Brown, Curtis, Johnson, Newman, Dimmock, Roberts and others.

After the transaction of business a very brief examination could be made of the grounds at Mt. Eminence. Mr. Starr came here but two years since, yet he has already set some 200 apple trees, principally Newton, Pippin, Janet and Winesap, with some Rome Beauty and Ben Davis, 2,300 peach trees, about 500 pear, 200 cherry and 400 grape vines, embracing 30 varieties, but mainly Concord and Catawba. The growth of the Delaware here in trenched ground has already been

in some instances over six feet the present season, and betokens great congeniality in soil and climate.

The estate of Mt. Eminence comprises some 400 acres, 100 of which are in cultivation, a part for the period of thirty years. Some peach trees are yet living of an orchard set in 1832. The point is highest in the range of Illinois bluffs between Alton and Grafton, and commands a wide extent of beautiful landscape. Far inland are seen the towers of Monticello Seminary, and over the river the houses and church of the ancient village of Portage de Sioux, backed by fertile fields of grass and grain, with the distant waters of the Missouri beyond.

Geologically the cliffs are an older formation than those below the mouth of the Piassa, and present quite a different aspect, being turreted by the action of water, and crowned with varied and beautiful forests.

THE GRAPE CULTURIST—We have before called the attention of our readers to this valuable work. Since then we have given it a careful reading and can add our testimony to its practical value.

Every person engaged in grape culture even on a small scale, should have a copy. Address O. S. Fuller, Brooklyn, New York.

TURNIP SEED.—A writer in the *Canada Farmer* says that he has sown turnip seed for 23 years, and has annually proved its vitality by first sowing a hundred seeds in a flower pot. The result has invariably been from 96 to 190 plants from 100 seeds of one year old. He now has sixty-eight plants from 100 seed gathered in 1856, against 68 per cent of vitality in turnip seed eight weeks old.

Oiling Implements.

Many agricultural implements may be worked with a much less amount of force by lubricating the journals and other parts where two metals work against each other, with a proper kind of oil.

The object of lubrication is to overcome friction by filling the space between any two surfaces, supposed to be in contact with oil or other material, so as to prevent the metals from abrading each other.

When common oil is used, this object is attained but in degree, and in agricultural implements which are occasionally out of use the effect of time is to render the oil gummy and adhesive.

All this may be avoided by using cold pressed sperm oil, such as does not stiffen in cold weather, and is free from albumen and other impurities.

In warm weather lard may be used with good effect.

TRANSACTIONS OF THE STATE HORTICULTURAL SOCIETY FOR 1863.—This booklet contains one hundred and forty-seven pages of highly valuable matter. The Corresponding Secretary, under whose supervision the work appears, is entitled to the thanks of fruit growers and gardeners for the large amount of time and talent that he has devoted to it. We could add to the value of our pages by liberal extracts from the work, but as every fruit grower and gardener should have a copy, have, we will be content to call attention to the fact that it is now ready for sale by A. C. Flagg, Secretary, Alton, Ill., at 40 cts. by express in paper, by mail 60 cts. In muslin by express 75 cts., by mail 90 cts.

Editor's Table.

BAKER & PHILLIPS - - - PUBLISHERS.

M. L. DUNLAP, Editor.

SPRINGFIELD, ILLINOIS, JULY, 1864.

Yesterday, June 19th, we had a most refreshing shower. Vegetation had begun to yield to the drouth—newly set trees were crisping up their leaves; the late planted corn lay in the dry soil half swollen and disposed to give up all hopes of sending down its radicle; the peas would not fill out; the strawberry had ceased to yield other than lilliputian berries; the oats had a fearful shortness, and the grass refused to become luxurious, while the newly plowed land came up in great clods, eloquent of sterility. Now all is changed. The soil has become friable and the whole green surface, whether in rows, broadcuts, meadow or pasture, is wearing the garb of renovation. What a sudden transition for a few short hours! Day after day we had watched the clouds come and go. The smoke of the passing trains was our weather vane, and the course of the wind became a study. Now it came from the northeast laden with the coolness from the surface of Lake Michigan; now east, when our hopes grow apace; anon in the southeast, a sure harbinger that the genii of the Ozark Range was busy planning us a storm; a sudden shifting to the southwest—the skeleton of the storm had passed, but the storm, alas, was wanting. Thus week after week rolled by and nought but a sprinkle gladdened the thirsty soil. Speculation ran high—shall the season of 1863 be repeated—is the corn crop, the great staple of central Illinois, to be another failure—and will the hay crop go down with it? The latter is already shortened and the former cannot fully recover. The signs of rain have all vanished and the specter of the Ozark has fled. The moon rose on a cloudless sky and proudly marched over the thirsty waste, looking down with a stately aspect which might say, "Boast not of your rich soil, for without the gentle shower that is gathered in the gulf, you will be helpless. Would you win moisture from the summer cloud, plant trees; belt your farms with conductors whose green spires shall aid the lightning in staying the swift passage of the clouds until the rain charged cloud shall have the last drop of moisture driven from it by the contending currents of air."

The rain came—delayed it was, but it came at last. Ere the church bells had tolled to the morn-

ing worship, black clouds lay in lazy folds around the horizon and shut out the sun, the spectre was in the southeast and a low growl of thunder came from the west. The smooth surface of the green tinted sea like clouds began to emerge from below the horizon with the speed of the moving train. It came steadily forward—the scattering drops, the vanguard of the storm like a line of skirmishers, is upon us, followed by the solid columns of moving water. The dust is washed from the drooping vegetation. An hour, and the earth has drunk in the kindly shower, and the flagging vegetation stands erect, glistening with the globules that have kissed the gratified leaflets.

If the rain has made buoyant and invigorated tree and plant, it has also gladdened the heart of the cultivator of the soil, and braced him up for renewed activity. The moon again rides an almost cloudless night, but vegetation has no time to discuss the loss of a segment from her yesternight full orb'd circle, for they must take a new start in life. This morning every green thing wears a smiling aspect. The adolescent apples peer out from their leafy canopy; the May cherry glows with a maturer cheek; the currant is putting on a tinge of red; the strawberry has assumed a more pleasing form; the raspberry is looming into importance; the cabbage has spread out its leaves, and the grape has put forth another tendril; the corn is fairly laughing down the long rows, while the potato is being bedecked with bloom, and leaves erect, inviting another passage of the Stafford, that shall give a more ample ridge of earth for the forming tubers; twenty-five acres of canary seed with its cone-like heads shall give better promise of grain to cheer the bird of song; the barley, wheat and oats shall now have full-rounded and ample berry, while the meadow will send out new tillers to amplify the windrow; the school girl's bed of flowers shall glow with richer beauty, while the matron's vines climb higher and cast over window and lattice a deeper shade.

NATURAL HISTORY SOCIETY.—The second volume of Transactions, we learn, is nearly ready for the members.

The following are among the articles:

1st. Prof. Turner's address on Education, at the dedication of the Museum.

2d. Dr. George Vasey's new Catalogue of the Plants of Illinois

3d. Origin of the Prairies, by Prof. Alexander Winchell.

4th. Trees in Winter, by Dr. Frederick Brendel, with fifty illustrations.

5th. B. D. Walsh's Papers on Entomology.

6th. Natural Resources of our Commonwealth,

The Temperature.

THERMOMETER IN THE OPEN AIR.

Day of Month.		7 A. M.	2 P. M.	9 P. M.	
1864.	May.....	1	62	56	50
"	"	2	42	48	44
"	"	3	48	61	50
"	"	4	42	70	58
"	"	5	62	81	71
"	"	6	68	80	68
"	"	7	68	82	68
"	"	8	66	72	65
"	"	9	67	82	72
"	"	10	41	45	42
"	"	11	60	61	50
"	"	12	50	75	60
"	"	13	58	64	58
"	"	14	69	68	56
"	"	15	56	58	60
"	"	16	62	80	62
"	"	17	64	72	62
"	"	18	70	78	65
"	"	19	62	78	68
"	"	20	68	88	78
"	"	21	74	88	68
"	"	22	79	92	75
"	"	23	84	89	71
"	"	24	62	68	54
"	"	25	58	67	57
"	"	26	58	73	62
"	"	27	72	77	64
"	"	28	53	59	56
"	"	29	49	80	71
"	"	30	79	86	71
"	"	31	70	85	68
Means.....		63	74	62	
Mean for the month.....		66			

The average temperature of the month has been low, with several sudden changes attended with considerable high wind, from the direction of Lake Michigan.

On the 2nd inst. strawberries commenced blooming; on the 6th the pear was out; the crab apple on the 7th, and the cherry and apple the 8th. On the morning of the 10th we had a hard freeze with high wind, which has seriously lessened the apple crop. The 24th we had a slight sprinkle, but not sufficient to wet the ground an inch deep;—no other rain during the month.

The first ripe strawberries were picked the 30th and the first fruit had on the table the 31st inst. These were the Early Scaelrt, or Virginia Scarlet, a favorite variety with us.

When you are trying to sleep, it is not pleasant to have two dogs half a mile apart, discussing a dogmatical difference of opinion.

by C. D. Wilber.

7th. The Avalanche of the Ocean, by Prof. Turner.

8th. Limits of Aborescent Vegetation in Illinois, by Dr. Vasey.

9th. New Theory of Respiration, by Dr. J. A. Sewall.

10th. The Illinois Coal Fields, by C. D. Wilber, with forty illustrations.

11th. Chess and Wheat.

12th. Miscellaneous Papers.

13th. Secretary's Report.

14th. Curator's Report.

The number of specimens added to the Museum since June 26th, '63, is 4,000, including plants, fossils, minerals and crystals. A large and splendid collection of casts of rare fossils, from European Museums, has just been received. The Society is free from debt, and is rapidly carrying out the objects for which it was founded.

It had been our intention to have attended the June meeting of the Society, but we have some active duties to perform at this time about the farm, the orchard and the garden. In fact our time is so fully occupied at home that it is about out of the question to take even a hasty look through the State.

REPORT OF THE ILLINOIS STATE SANITARY BUREAU—Through the politeness of Col. John R. Woods, the Recording Secretary and General State Agent, we are in receipt of this interesting report. Whatever may have been or is now the difference of opinion in regard to the war and its cause, it is certain that this State is one of the largest contributors in men, money and material.

At the beginning of the war the resources of the State were just beginning to be developed on a scale of magnitude that was challenging admiration; but the plow was left in the furrow, the tools in the workshop, and goods on the counter, to grasp the musket and to train the cannon. But if the stalwart sons of the State thus left their wonted vocations, others, if not as strong, took their plows and pushed the State forward on her career of greatness. She has poured out money like water and men as trees to stay this rebellion, to wipe out its curse and to reach an honorable peace. May the end be not far off!

The report is a closely printed pamphlet of ninety-eight pages, and contains a detailed account of the Commission. It is to be hoped that a copy will find its way to every aid society, if not to every fireside in the State.

Address Col. John R. Woods, Recording Secretary, Springfield, Ill.

Cast Cast-Steel Plows.

We stated in the June No. of the FARMER that we were using one of Deer's cast cast-steel plows. We are now through the season of plowing, and again repeat, that for all kinds of cross plowing it is the best plow that has ever come to our hand. We have about a dozen plows, some of them but little worn and mostly of cast-steel, but we cannot afford to use them up, as we can more than save their loss in the superior work and ease of draft of the new plows. We gave it a trial in breaking with two horses, and found it well suited to the work. In some of our land that has been plowed a foot deep, we have always found it difficult to set the plow to scour, and in some instances have failed, but in no case has the new plow failed in this respect, and we think that it will scour in any and all kinds of prairie soil, under any condition. We have one piece of land on which no cast-steel plow would scour before this trial on account of its loose friable condition, not even one of Deer's best cast-steel, but the new plow turned it over without the least difficulty. Why this difference we cannot say, but only know it to be a fact. It may be that granulated steel is better in this respect than rolled or hammered steel, and it may be that the casting of the share and land side may have something to do with it. For cheapness, durability, ease of draft and quality of work, the new cast cast-steel plow is largely ahead of anything that we have put into our soil. Success to the persevering genius of John Deer, whose plows turn up our matchless soil, and whose name is familiar wherever the harvest rustles on the prairie of the west.

For the Illinois Farmer.

Hand Looms.

MT. VERNON, ILL., June 12, 1864.

Editor Illinois Farmer—Dear Sir:

Can you give me any information in regard to hand looms? I want something with which a family can manufacture their own cloth, such as jeans, linsey, rag carpets, &c. I saw two patents last fall at the State Fair, but did not learn where they were manufactured. I would be glad for information on this subject, the prices and your opinion of its utility, &c.

Our county fair commences on the 28th day of September.

Yours very respectfully,

JOHN WILBANKS.

—The name of Arkright has become immortal, for the reason that his genius sought out the power loom by which the household became in part disenthralled. If the music of the spinning wheel departed from the kitchen, and the steady slam of

the loom from the woodshed, we have in their place many pleasant surroundings to our homes, and it is to be hoped that no retrograde movement will ever bring back these toilsome implements that for ages bound the larger portion of the rural populations in bonds of ignorance and unequalled toil. Give us the fast revolving wheels that twirl the thread on the spinning jenny, and the clatter of the iron loom that beats responsive to the pulsation of the escaping steam, and we will be content. We have no respect for the genius that will return us a hand loom, for he is but a tyro and born out of time at least a thousand years. We would as soon think of cutting our grass with the old scythe, dropping our corn by hand, thrashing out wheat with single blows of the hand flail, as to have our wife and daughters again have the old wheel and the hand loom forced upon them. We feel proud that the spinning wheel, the hand loom, the needle and the old cooking apparatus have given place to the spinning jenny, the power loom, the sewing machine and the cooking range. The piano, the melodeon, books, flowers, and a thousand little comforts are now at hand to adorn and make pleasant our rural homes. Our wives and daughters can take a higher social position and attend to their household duties with more pleasant music.—En.

For the Illinois Farmer.

A Destructive Catterpillar.

LAOMI, SANGAMON CO. ILL., June 14, '64.

M. L. Dunlap, Esq. Dear Sir:

In this neighborhood we have been troubled with a small catterpillar infesting the apple tree, in some cases stripping the tree of its leaves, and so injuring them that they fall off. When you shake or jar the tree the catterpillars fall to the ground, hanging by a web and by which they again climb up.

Please give us the name and cure for this pest of the orchard, and oblige yours,

A. BOWEN.

P. S. Can you tell me how to destroy moles?

—The catterpillar is probably the *hyphantria textor*. The only time that we have found available to destroy this insect is when they are small and in clusters near the end of the branches, when they should be crushed beneath your feet. We have been assured that no bird will eat this worm, but of this we have some grave doubts. We find little trouble in keeping them down when taken in season, but depend on hand picking and the crushing out process,

We do not apprehend that moles do harm, that is, so much as they do good. They live on beetles

and cut worms, hence we never kill them. This spring we hear great complaint of them in the corn field, but found them to disappear as soon as we put the cultivator to work. We must have more testimony against them before we can make any attempt on their life. It is a little provoking to have them run through the flower beds or garden, but the grubs are still more provoking and we prefer the lesser evil.—Ed.

The Boyhood Home of the Hero Baker.

To the Editors of the Alton Telegraph :

Stood you ever, Mr. Editor, on Mt. Eminence? It is a glorious spot!—that boyhood home of the hero of Ball's Bluff. Eminence!—'tis well named—the highest point of land between the "Great American bottom" and the mouth of the Illinois river.

Piled here, stratum upon stratum, the giant cliffs lift their massive forms high into the blue air. And from this eminence how vast, how beautiful, how grand the panorama spread out before! With one sweep of the eye, you take in almost the entire combination of nature's beauties and nature's grandeurs—the mighty river, the beautiful lake, the broad prairie, the waving forest, the towering cliff, the lofty mountain—distance interminable, and the blue vault bending over all. But let us analyze this scene, Mr. Editor, and examine its component parts. Mount Eminence forms a part of the north bank of the Mississippi river some ten or more miles above the city of Alton; on its summit we are told, you stand four hundred feet above the great river.

From the water upward half this distance is composed of an irregular facade of cliff lime stone, here and there cut into columns, truncated cones, pilasters and bastions. From the top of the rocks to the summit the friable earth has an inclination of a few degrees. Turning to the west and looking up the river you see the village of Elsah at the water's edge. With the mighty hills hanging over it, here stooping gracefully to the water line, there broken into massive cliffs—portions of the hills densely and portions sparsely covered with forest trees, and carpeted with green grass. And yet further west you see the confluence of the Illinois with the Mississippi.

From this point the great river sweeps round and bears to the southwest for miles upon miles, until it doubles a promontory almost at the farthest ken of the eye, and thence resuming its northern course, is lost to the gazer. Turning to the east and looking down the river, you view the cliffs overhanging the city of Alton. On your right hand and on your left in the river, are beautiful islands—one heart shaped, opposite Elsah, so thickly covered with trees and shrubbery that you can see no land, but simply one dense mass of foliage extending to the very water, and up the vista between it and the main shore, you look into the very parlor of beauty. But now let us turn and front to the south, and what a picture we have there!

Looking down four hundred feet the eye falls upon a perfectly level plain—its western and southwestern portions for many miles a magnificent prairie—its eastern portion one vast, unbroken

forest—its central portion dotted with isolated trees—patches of prairie and a large, winding lake, the view of which is broken by occasional clumps of trees. In the foreground immediately in front of you, nestling amid shrubbery and fruit trees, is gathered the ancient French village Portage de Sioux. Radiating from this to the west, south and east, are many fine farms with their dwellings, orchards and out buildings. And now peering onward and onward through the hazy atmosphere, as far to the south as the eye can reach, we behold lofty ranges of hills—one succeeding another, and still receding until at last we are in doubt as to whether we are looking upon a mountain range, or gazing into misty air. And breaking through a deep gorge in one of these mountain ranges, the mighty Missouri river, with its turbid flood, comes dashing on until it approaches near you, when, abruptly turning to the east, the two great floods—Mississippi and Missouri—flow side by side for many miles.

I have been thus minute, Mr. Editor, (and yet have only partially painted the picture), because this is said to be the finest scene to be witnessed from any portion of the State of Illinois, if not from any portion of the entire Mississippi valley; and farther that we may comprehend the influence thrown around the early life of the lamented Gen. Baker. More than thirty years ago the first advancing wave of civilization broke upon Mt. Eminence, but its impression was so slight, its stay so short, that its marks and traces have also passed, and nature again asserts her almost uncombated sway. As a part of this pioneer wave came the father of young Baker (an Irish emigrant) and his family. He opened a store and around him was built a village.

Through three deep ravines and over these great hills, looking out upon these mighty rivers and far spreading prairies, and magnificent forests, and beautiful lake, and mountain ranges, and through the blue air into limitless space, Master Baker spent those gleesome hours of boyhood, when vivid impressions are indelible, and stamp the character for all time; aye, for eternity too. With such impressions and glorious surroundings, however low the mental organization of that boy, but whose thoughts and aims and actions, on attaining manhood, would not be of a lofty and ennobling character, carrying him forward to the front rank of his compeers. From this schooling we would expect to find a character imbued with patriotism, a firm and steady man, leading forward the front ranks of brothers in arms upon the battle fields of Mexico, taking the van of the emigrant train in scaling the Rocky Mountains in quest of adventure, and from the broad Pacific coming back the champion of Freedom—the representative of a mighty nation—the upholder of a noble Constitution. And should treachery raise its hideous head we should expect him to strike it down, or in the effort himself be stricken down. And how apposite that the life commenced on the frowning bluffs of the Mississippi should terminate upon a lofty bluff for the protection of the nation's life.

But time has passed and the second wave of civilization has reached Mount Eminence, and we find there now the grape and the peach, the well filled library, the charm of social refinement, and believe that ere long Mr. Starr, its present proprietor, will make of the Mount an Eden.

GENERAL VIEWER.

Special Notices.

AGENTS.—We do not appoint any agents—all are voluntary. Any person so disposed, can act as agent in any place.

ENLARGE YOUR CLUB.—Will not the friends of the ILLINOIS FARMER inquire how many copies of the FARMER are taken in their respective offices, and pass around among those who ought to have their names added to the list? Our terms are so low to clubs of ten and twenty that we ought to have one or the other made up at every office in the State, and at every office in Central Illinois, one of twenty or more. Will our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?

TO SINGLE SUBSCRIBERS.—You receive the only copy of the FARMER that goes to your post office. Can you not send one, two, three or more new subscribers, without any trouble? Try. Sample numbers, etc., sent free.

DRAFTS.—Those remitting us large amounts of money, will please send us drafts on Springfield or Chicago, less they exchange. If you send cash in a letter, be sure that it is well sealed and well directed, to Baker & Phillips, Springfield, Illinois.

THE FARMER AS A PRESENT.—Any of our subscribers who wish to make a present of the ILLINOIS FARMER for 1863, can have it at the lowest club rates, when out of the State. For fifty cents you can treat your Eastern friends to a Western Agricultural Paper. In no way can you invest that amount to so good advantage to emigration.

SEND NOW.—Any person who remits pay for a club of ten or fifteen, or any other number at the specified rates for such clubs, can afterwards add to the clubs, and take advantage of the reduction. Thus a person sending us five subscribers and three dollars, can afterwards send us three dollars more and receive six copies.

TO THE CASUAL READER.—This and other numbers of the ILLINOIS FARMER will be sent to many persons who now use it for the first time. Will they not examine it, and if they like it, subscribe for it, and ask their neighbors to subscribe? Sample numbers, prospectuses, etc., sent free to all applicants. See terms elsewhere.


HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighborhood, can easily make up a club of five, ten or twenty, but no time should be lost in doing so, for your neighbors may send east for their


paper which, though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us Western farming.


HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage:


1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it.
2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them.
3. Get post masters interested. They see everybody, and are efficient workers.
4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers.
5. Begin now, before the agents of Eastern papers get up their clubs.

This last hint is especially important. Let us hear from you soon. See terms elsewhere.

 Clubs may be composed of persons in all parts of the United States. It will be the same to the publishers if they send papers to one or a hundred post offices. Additions made at any time at club rates. We mail by printed slips, which are so cheaply placed on the papers, that it matters little whether they go to one or a dozen offices.

 Correspondents will please be particular to give the name of the post office, county and State.

 Specimen numbers will be sent gratis, upon application.

 Address

BAKER & PHILLIPS,
Springfield, Illinois.

SPECIAL NOTICE.—For terms see prospectus on last page. All exchanges and communications for the eye of the editor should be directed to ILLINOIS FARMER, Champaign, Illinois. Electrotypes and business matters, and subscriptions, to the publishers, Springfield, Illinois. Implements and models for examination should be sent to the editor. The editor will, so far as it can be done personally, test and examine all new machines and improvements submitted to his inspection. He will be found at home, on his farm, nearly all of the time. So far as it is possible, the conductors on the Illinois Central Railroad will let off passengers at his place, which is directly on the road, three and a half miles south of the Urbana Station, now the city of Champaign.

FURST & BRADLEY,

MANUFACTURERS OF

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Nos. 55 and 58 North Jefferson Street,

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CHICAGO, ILLINOIS.

Plows of all sizes and patterns, Cultivators, Horse Hoes, Harrows, Corn Shellers, Straw Cutters, Garden and Rail Road Wheelbarrows, Road Scrapers—five different patterns—Sulky Corn and Grain Cultivators, Sulky Hay Rake, with steel wire teeth revolving.

Send for a priced Catalogue.

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April-64-1y*



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Send for my circular of directions for cultivation, &c. Address **M. M. MURREY,**
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WEEED'S TREE AND PLANT PROTECTOR WILL protect trees against injury from AUTUMN, WINTER OR SPRING FROSTS, and secure an annual crop of Peaches, Apricots, Nectarines, Heart Cherries, Blackberries, Strawberries in any part of the Central or Northern States; and prevent all loss of trees or plants by *Winter killing*.

Patented Oct. 21st, 1862, and Dec. 8th, 1863,

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April-64-3mo*

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FIRST PREMIUM

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The only one combining all the Mechanical Principles necessary to a

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The lateral or self-adjusting motion of the plows and is an effectual

BAR AGAINST BREAKING,

When it comes in contact with unseen obstacles.

It is Made of the Best Material,

BY EXPERIENCED WORKMEN.

THE SHOVELS OF FIRST QUALITY

OF

CAST STEEL.

Altogether, it far excels all others in point of

Utility. Durability and

WORKMANSHIP.

Price \$50 cash on board the cars at Decatur.

Send for Descriptive Pamphlet.

BARBER & HAWLEY,
Manufacturers,
Decatur, Ill.

March, 1864—3m.

EVERGREEN SEEDLINGS.

A very large stock of superior grown Evergreen Seedlings, at less than one-half the Eastern Prices.
PER 1,000.

NORWAY SPRUCE, two years old,
three to five inches, \$5,00

NORWAY SPRUCE, three years
old, six to nine inches, \$8,00

SCOTCH PINE, two years old,
three to five inches, \$7,00

AUSTRIAN PINE, two years old, \$2 per 100.

BALSAM FIR, RED CEDAR, ARBIVITÆ, &c., &c.,
of large or small size, at very low rates.

A large stock of CONCORD GRAPES, one of the
best varieties for the West.

A large stock of RED DUTCH CURRANTS, the
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STANDARD AND DWARF PEARS, of well
tested varieties, together with a good assortment of
Fruit and Ornamental Trees, &c., &c.

Send for Catalogue. ROBT. DOUGLAS.
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TO GRAPE GROWERS.

The subscriber has a large stock of the most vigor-
ous growth layers of the following desirable varieties,
which he will sell at very low rates, to wit:

CONCORD. \$55 per 1,000.

A few thousand of bearing age, of large size at
\$75 per 1,000.

These will produce a good crop the second year.

HARTFORD PROLIFIC, \$10 per 1,00, or
ten for a dollar.

REBECCA, \$10 per 100.

DIANA, \$10 per 100

The above will be well packed,
to go any distance.

TERMS—Cash, or approved bank paper
short date.

JAMES SMITH.
DES MOINES IOWA, Jan. 1, 1863.

**WANTED.
KNITTING MACHINES.**

Every Farmer to know that his "Women Folks
can earn \$6 to \$20 per week with one of Akin's Cele-
brated Knitting Machines. It will earn its cost in
thirty days. Price complete \$75. Weight 45 pound.
Freight from 50 cents to \$1 50. Send for circular
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Apr '63 ly

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Eighty Acres Fruit and Ornamental Trees

200 NAMED SORTS TULIPS, ALSO HYACINTH,
Crocus, and a general assortment of Bulbs
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Nursery stock, Evergreens, Greenhouse and garden
plants—all at wholesale and retail at lowest cash
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For particulars see Catalogues or address subscriber.
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Dunlap's Nursery.

This nursery has good atock of apple trees of all
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Maple, from \$5 to \$15 per 100, 6 to 10 feet high. The
green house is well stocked with roses and other bud-
ding out plants. This stock is grown to retail and
not adopted to the tree peddler, as all trees and plants
are large, stacky and thrifty, and intended for the
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Address, M. L. DUNLAP,
Champaign.
March 1, 1863.tf

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(Successors to G. S. Thompson.)

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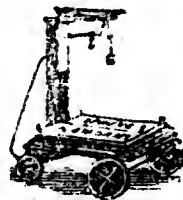
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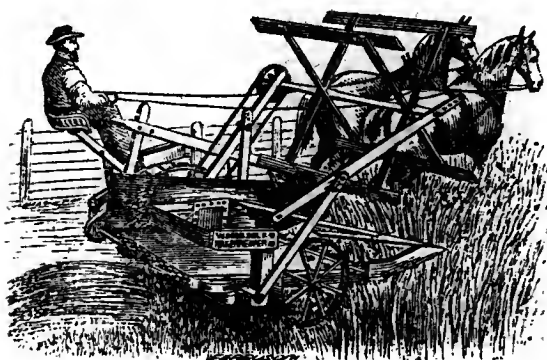
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WOOD'S SELF RAKER,



COMBINED AND SINGLE.

This Machine has won for itself the enviable title of "Victor" having vanquished all the self raking machines made or sold in the West, at the

GREAT DIXON REAPER TRIAL,

held under the direction of the Ill. State Agriculture Society, which was the largest and most thorough field trial ever held in this country—over forty machines entering for competition.

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was awarded the *first* prize as a Reaper.

Again, at the DeKalb trial last season, where there was a great struggle among all manufacturers for three days in the field, W. A. Wood's received

THE FIRST PRIZE

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This Machine is warranted to be the lightest draft Reaper made.

The most simple and durable

Having the least side draft, and

Being the best Self Raker in the world.

Making a gavel any size at will of driver.

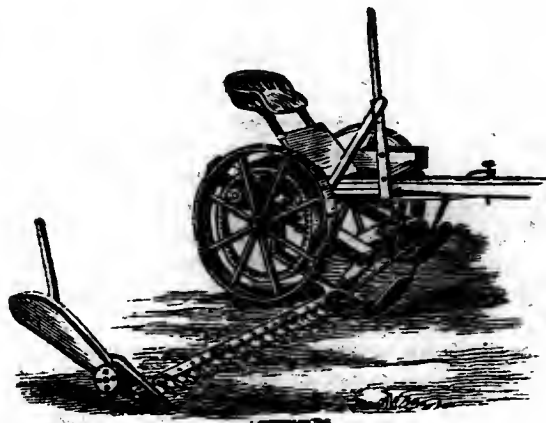
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The superiority of Wood's Mowing and Reaping Machines is now fully established, both in this country and Europe.

The Prize Mower, of which there were made and sold over Six thousand last season—a larger number by far than was made by any other manufacturer in the world, yet the demand is not supplied—is offered this season with many valuable improvements. (See Pamphlet.)

To Wood's Prize Mower has been awarded more high premiums than any other Machine during the same time.

POINTS OF SUPERIORITY.

It is the lightest draft mower in use.

It is the most simple machine made.

It is the most durable.

It has no side draft.

It has no weight on horses' necks.

It will cut all kinds of grass without clogging.

It is sold at a very low price.


It cuts very close to the ground.

For full particulars call on Local Agents, or send for pamphlets

CHARLES E. WHITMAN.

General Western Agent,

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 Large stock of Extras constantly on hand.

April-3m

The Illinois Farmer,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE.

PUBLISHED AT

SPRINGFIELD, - - ILLINOIS,

BY

BAKER & PHILLIPS,

AND IS EDITED BY

M. L. DUNLAP, Tribune's Rural.

TERMS IN ADVANCE.—\$1 a year; two copies 1 50; five copies \$3; ten copies \$6, and one to get up of the club twenty copies \$10.

It is not necessary that the club should all be at one office—we send wherever the members of the club may reside.

The postage on the FARMER is only three cents a year in the State of Illinois, and six cents out of it.

Specimens numbers sent free on application.

Subscription money may be sent at the risk of the publisher.

Exchanges and communications for the eye of the Editor should be addressed, ILLINOIS FARMER, Champaign Illinois.

All business letters are to be directed to the publishers, Springfield.

TERMS OF ADVERTISING:

	1 mo.	3 mo.	6 mo.	12 mo.
One page, or two columns.....	8	\$20	\$35	\$50
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One fourth page or half column..	3	7	12	18
One eighth or one fourth ".....	2	4	7	10
One square of ten lines.....	1	2	4	7
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Ten cents a line for less than a square each insertion.

All worthy objects advertised, and those of importance to the Farmer will receive, from time to time, such editorial notices as the Editor may consider them worthy of, without additional charge.

Implements and seeds to be tested should be sent direct to the Editor, at his residence, Champaign.

We have put the price of advertising within reach of all. It will enable those who like to freely advertise their goods, to do so at a cheap rate.

Terms, cash. Yearly advertisers will pay semi-annually, and all transient advertisements must be accompanied with the cash to insure insertion.

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THE ILLINOIS STATE JOURNAL

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TERMS:

One copy one year.....	\$2 00
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Payable always in advance. Persons sending clubs of ten and upwards shall be entitled to an extra copy.

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Sanford & Mallory's Flax and Hemp Machines.

These celebrated machines are on exhibition and in operation in a building adjoining the Chicago Sugar Refinery. For circular telling all about them, price, &c., address

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May 1 '63, ly

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ONE THAT PAYS.

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"PRAIRIE FARMER,"

Has now been published in Chicago, Ill., for twenty-two years, without intermission. It is devoted to the Producer's interests, treating of

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STOCK RAISING,

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And DOMESTIC ECONOMY generally.

The Publishers' aim will be to give such information and assistance as will enable the farmer to grow the largest crops with the least expense, and what is equally important to assist him in securing the

LARGEST PRICES

the market affords, by giving such reliable information that is obtainable concerning the markets at home and abroad—the cost of forwarding produce to market, and other attendant expenses—thus enabling the producer to take advantage of the conditions of the market in dispensing of his produce.

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The paper consists of 16 pages large quarto, making a convenient size for binding and reference. A full index is given at the end of each six months.

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About five pages are devoted to General Agriculture; one to two pages to Horticulture; one page to Literature; two or more pages to General War Miscellany and News; two pages to Markets and Record of Season, and asking and answering questions, and general editorial items.

A portion will also be devoted to Advertisements of such character as is appropriate to an Agricultural paper.

DR. GEO. H. DADD.

This celebrated Veterinary Surgeon will contribute regularly to the FARMER, giving especial attention to the answering of questions and giving information upon matters interesting to stock growers.

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Commencing January 1st, 1863, and the present time affords the best time to form clubs for the year.

One copy one year.....\$2 00

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Larger clubs furnished at liberal rates, or premiums given where clubs of six or more are sent at \$1 50 each.

Specimen copies and show bills sent to any one who desires them for examination or the purpose of raising a club.

For sale by news dealers generally.

For samples or other information concerning the paper, address

EMERY & CO., Chicago, Ill.

THE ILLINOIS FARMER.

VOL. IX.

SPRINGFIELD, ILL., AUGUST, 1864.

NO. 8.

The Illinois Farmer,

DEVOTED TO THE

FARM, THE ORCHARD AND THE GARDEN,


PUBLISHED BY

BAKER & PHILLIPS,

SPRINGFIELD, - - - - - ILLINOIS.

M. L. DUNLAP, Editor.

All business letters should be addressed to the publishers.

 EXCHANGES and all matters pertaining to the editorial department, must be directed to ILLINOIS FARMER, Champaign, Ill., as the editor resides at that point, and is seldom at the office of publication, from which he is distant over eighty miles.

* * * For terms see prospectus and special notices in advertising department.

August.

The month of the Dog Star is at hand. The sun comes up with a proud, defiant look, as if he had never been in the offing, looking hazily down on the earth mantled in frost, or with its lakes and rivers bound in thick-ribbed ice. The white cumuli lay in lazy folds in the upper stories of the air, or sailing dreamily about indifferent to the fate of the crops, so much in need of the gentle shower.

August begins the pencilling of the more gorgeous fruits and flowers, and puts on more elaborate colors and showy dyes.

The music of the reaper is wafted by summer zephyrs from distant fields, while the song of the thresher gladdens the tenants of the barnyard and cheers the toil-worn farmer; for with it comes the culmination or the downfall of his hopes.

Out through the orchard the full-orbed apples are putting on the garb of ripeness and the cider press shall soon gush with its liquid treasure. The days of the strawberry, the currant, the gooseberry, the cherry and the raspberry have passed. The blackberry has drawn a blank, and the place of the peach cannot be filled; but the apple and the pear are coming nobly forward to make amends as far as possible. The corn is *laid by* and making good progress, while the sweet potato is fairly laughing in the ardent blaze of the sun.

Summer is now culminating and we must hasten to assist it in the last finishing touches to the products of the field.

The double shovel plow must be run through the rows of potatoes, but not in any way to disturb the hills; and the weeds must be cut and pulled from them, for who wishes to dig or pick up potatoes from among the tall autumn weeds?—not us, and we trust not you, gentle and industrious reader.

The corn is laid by with a double shovel or wheel cultivator, but there are strong weeds in the rows that have es-

caped, or there are the autumn weeds and grasses that grow with matchless rapidity;—such must be cut down with the hoe, for they draw from the ears of corn, that would otherwise be well filled out.

A large amount of prairie hay is cut this month. Allow it to wilt in the sun, rake it at once and put it in cock to cure. Hay thus cured is worth double that which is crisped up in the sun and bleached out by the dews.

Meadow and pasture land can now be turned over for winter wheat or rye, to be sown early next month. If you are short of autumn pasture, sow rye and you will find it valuable.

The garden should be worked often and not allowed to be lost in a hopeless swamp of weeds; a little attention this month will repay you in larger vegetables and in the better appearance of your grounds.

Autumn, or rather summer plowing, should begin the last of this month, so soon as the harvest is over no time should be lost in turning under the stubble. If in a field that can be pastured the feed will be valuable, if for the small grains it will have the effect of a summer fallow; if for corn the ground will be ready without re-plowing in spring, merely by stirring the surface, enabling you to plant early, which is a very important consideration, when you come to sell or use the crop.

Early apples must be looked after, the best sent to market and the poor ones made into cider or vinegar. Ripe apples are very healthy for all classes and ages of people, but the green are too full of colic to be tasted unless well cooked.

There are many active duties for August, but not so full of hurry and

drive as the months past. We have more of finishing up of the summer work, less of the real hard work, yet an abundance of work of odds and ends to keep us busy. This is a bad month in which to overwork one's self, or to be exposed to rain or dew, for such things are brought against us in September when we receive the penalty for our ill doing.

If the overseer of highways has not attended to his duty before, he must not delay beyond this month to put his road in order. Road work should be faithfully done; for at best the roads will be in poor enough order during the autumn rains.

How a Large Farm is Managed.

Most people who purchase large tracts of wild lands make their profit out of them by enhanced prices occasioned by those who improve the adjacent lands, thus making a demand for them. In this way the speculators in western lands have wrung millions of dollars out of the hardy pioneer, for it may be safe to say that not one-fourth of the lands of the State were purchased of the Government by those who now own and occupy them.

M. L. Sullivant, formerly of Ohio, and who was a practical farmer of the Sciota valley near Columbus, having accumulated a large capital, entered mostly with soldiers' warrants, some sixty-five thousand acres of very choice land in this State. Twenty-two thousand acres of this land is in nearly a solid body, lying in the southeast part of Champaign County, and south of Horner Station, on the G. W. R. R.

Mr. S. conceived the idea that this body of land could be profitably farmed, and some eight years since entered

upon the experiment. The tract was destitute of timber, which had to be hauled six to ten miles to reach the several parts of the farm. Several thousand acres were broken up, and sown to the small grains or planted to corn, but the low price of grain and immense cost of improvements were not compatible, and the scheme looked much like a failure. Nothing daunted, Mr. S., who had remained with his family in Ohio, lately moved to the new farm and took the management into his own hands, and from day to day directed and superintended the whole minutæ of farm labor. That occurred three years since. He has now so extended the labor that it requires a general superintendent under him, a book-keeper, a herdsman and a plowman, or foreman of the farm hands. All of the plow land, except about 1,600 acres, was seeded down to timothy and clover. On the farm is over sixty miles of good post and board fence, and all the posts are on the ground for six miles more; which will complete the fencing of the whole tract.

The aim of the owner has been to economize labor and to cheapen the products of his broad acres. In this he has been eminently successful, and in many respects has set good examples to follow. In a former number we have given the readers of the FARMER the experiment with the rotary spader, and the great cheapening of preparing the soil for the various crops by its use. To put in 1,200 acres of corn is no boy's play, as this must be done with less than forty working days. 500 acres of this has been spaded, leaving 700 acres to plow. This would require 350 days with one team, to plow at the rate of two acres a day. Sixteen teams plow

some thirty acres a day. This is all harrowed by one man with two span of horses, and it is well done. A double whiffle tree some twenty feet long is used; to the ends of this the two teams are hitched, and along it is attached a gang of harrows, each five feet, working independent of each other, and of course they yield to all inequalities of the land. The driver rides the near horse of the near span and drives the other. He is followed with three of Brown's planters, which complete the work. Two teams follow with rollers, and the thirty acres are completed, making nearly two hundred acres a week. This requires seven-tenths of a day to the acre. The saving of labor in the harrowing will more than compensate the cost of the three boys who work the planters, but as check-rowing is of no value and not used, these planters should be mere automatic, so as to dispense with the labor of this extra hand; and yet better where they are attached directly to the roller, making a further large saving of labor.

The crop will be worked with two-horse cultivators, which will do eight acres a day, and as it is rolled, two workings is probably all that it will get. This will bring the team labor to about one day to the acre; and if we call this labor with the use of machine worth \$3 a day, we have the cost of an acre of corn, exclusive of seed and use of land, three dollars; put the rent and seed at five dollars and we have eight dollars the acre, or twenty cents a bushel of forty bushels to the acre, standing in the field.

A great number and variety of implements have from time to time been tested on this farm, and which now form a respectable museum or hospital

f rejected and worn out machines and implements, the works of misguided genius; or rather the steps by which he has attained to the present position.—Genius, like any other man, must be progressive, whether he graduates from the common school or the college.—Long plows stand in stately rows, with the rust of two years on them; single and double cultivators have become ignored; a whole school of planters, from the one hand, one horse, through the catalogue, to Brown's, and that must now be changed or it will next year go to the same ignominious heap of old implements; Ketchum's mowers of fifteen years, half bedded in the debris that has gathered over them, while Allen's, Danforth's and Atkins' keep them company; plows of all shapes have passed the threshold of decay and decrepitude, but among their number we do not see any from Moline, for the simple reason that they are wanted in the field. Threshing machines, hay presses and headers are abundant, though the latter are used for grain and timothy, and one of each of the former is held in some repute. Combined reapers and mowers have been given up; the header for grain, and the Kirby for grass is the rule. Clod crushers and rollers of horse killing proclivities are giving place to more recent improvements.

We could enlarge on this point but have made this article longer than was intended. We will close by writing Mr. Sullivant down in our list of practical farmers.

Notes on the Strawberry.

Our first picking of the Early Scarlet (large Virginia Scarlet) was on May 10th. although ripe berries had been

picked on them three to four days previously, but at that date the supply was sufficient for market. Dr. N. C. Meeker informs us that the first shipment of Wilson's Albany was made by him May 22d; and Capt. Evans, of Cobden, says the first shipment made at that point was May 23, only a week earlier than our Early Scarlet. At this date we have this variety on the table.—(June 21.)

With us the Wilson was but half grown and not ready for market under a week. In strawberry culture a week is of some importance, especially when we are to compete with points further south. It is true that the Wilson is the berry for long distances, but there can be no objection to the soft berries from this point. Mr. Booth, of Alton, finds that McAvoy's Superior, a very soft berry, reaches the Chicago market in fine condition, and he prefers it to the Wilson.

When the Early Scarlet is properly cultivated, it is of a good size, while the flavor is always No. 1. For market purposes we intend to give it a more prominent position hereafter.

The next berry to ripen is the McAvoy, and one that should not be overlooked by those cultivating in beds; it is of good size, hardy, and a profuse bearer. Longworth's Prolific is large, and to our taste one of the very best and should have a high position. Iowa proves a profuse bearer with us; the fruit is large and showy. Neck Pine is a profitable fruit. Triumph de Gand is very large, and when grown in hills must be productive, but if allowed in beds with runners, is of no value. Genesee is very large but acid. Several other kinds have more or less good qualities, but not sufficient to be retained.

Hand corn planters do not work well; it is better to hire a two-horse planter, costing \$40, which can be had with a team for \$2 a day.

At Mr. Dunlap's I was pleased with Stafford's cultivator, costing \$60. It is worked with two horses, the driver rides, it has four shovels; two more may be attached, which can be guaged to any depth or angle, throwing the soil right or left.

A shield of net work lets only fine dirt to the plants. It will perfectly finish any row, once going through, corn, potatoes, beans, cotton, beets, carrots, turnips—anything—and as quickly as 20 men can do it with hoes. It will put in small grain. I saw corn put in with it which had no other plowing. There are other cultivators which do first rate work. I know of none which will do so many kinds.

A farmer with 80 acres can hire reapers and mowers, for which he would have to pay in interest on these machines. One of each will answer for five farmers. Grass and grain can be hired cut for 75c. an acre, the board of two horses and one man included. The machine will cut from six to eight acres a day. Joint ownership in machines does not work well. Reapers and mowers combined are not satisfactory. The mower requires a faster motion than the reaper; for this cause combined machines break down. Grain binders as yet are not approved. The high price of wire is one drawback.

ONE HUNDRED AND SIXTY ACRE FARM.

With 160 acres, four horses are required. Such farmers should own a reaper, a mower, a railroad horse power to thresh and saw, a corn planter, a sulky rake and all the implements on an 80 acre farm.

Much is said of Comstock's rotary spader. I have seen it work. It makes the ground fine eight inches deep. Four horses are required. It cannot come into general use till it is made small enough for two horses, or till it shall be found profitable to hire work done with it. It costs \$200.

Mr. Sullivan, the owner of 30,000 acres, plowed or dug 500 acres with this machine this spring, at the rate of six acres a day for each team, and at the cost of 75 cents an acre. This farmer is preparing to plow two rows of corn a day with each of them. He proposes to start in the morning—the men will feed and have their dinner at the end of the first row; they will turn out by sundown at the end of the second row.

I talked with the boys riding the cultivators. They told me they liked rows a quarter of a mile long. The horses get rested if they turn round often.

FORTY ACRE FARMS BEST.

My firm impression is that the best farming will be done in Illinois when the farms shall be reduced to 40 acres each. Then let everything, garden, vegetables, corn or small fruit, be planted in rows. These on 40 acres can be a quarter of a mile long. Mr. Dunlap has tomatoes, cabbages, raspberries, strawberries, sweet potatoes, and the like, planted in rows of this length. They are perfectly straight. I never saw a more beautiful sight on any farm. With the use of the roller and Stafford's cultivator the cost of cultivation is reduced to a low point. I was before convinced that this is the best way to raise garden vegetables, and had put

it in execution, though not on so large a scale. A horse or so will in this way do the work of many men.

A NEW MACHINE.

Prof. Turner, of Jacksonville, has invented a machine which will break up, pulverize, sow wheat or other grains, and harrow by going over the ground once. The one he has was made for his own use. It is similar to Comstock's, though more varied. It needs some improvements. The war took off his mechanics. He related to me what this machine did. A field had been in corn near Jacksonville for fifty years. Finally it was rented badly worked, plowed in lumps, and would produce no more than 25 bushels of corn to the acre. This field was planted by his machine and the result was 120 bushels to the acre.

VALUE OF MANURE.

Though the prairie soil looks wonderfully fertile it does not yield so much as one would expect. One reason is, as it has been explained to me by those who ought to know, that the best element of fertility lies from four to six inches below the surface, in the shape of potash vitrified by sand, so as to be insoluble with water. Dunlap and others claim that if the soil is turned up to this depth in the fall the air will decompose this potash, when it will be ready to be taken up by the young plants, providing it is not plowed deep in the spring as to put it beyond their reach. Several farmers related to me their success in sowing spring wheat on corn ground, which is the same thing. Hence, land plowed in the fall will, by means of the potash afford moisture. This seems of great importance, but it would not be applicable in soil which run together and harden, unless there is clever to keep it open to the air.

But there is a thing of greater importance regarding prairie farming, and of which there can be no doubt. That which is called humus, which is similar to peat, and gives the black color, contains few elements which readily are taken up by plants. But when manure is applied a new compound is formed, and the result is a most wonderful growth. I know of no soil on which manure works so marvelously as on the black prairie. Here, and I must not fail to add, everywhere else, the application of manure is immensely profitable, for as plants get an early start, they shade the ground. Dry weather does little damage. Insects cannot keep pace with the growth, and the plant matures in spite of bad seasons and a thousand enemies.

I am writing what I have learned by my own experience, and from what I have seen on the farms of others. I say this: I can raise, one year with another, more grain, more potatoes and more vegetables of any description, on ten acres with plenty of manure, than in ordinary farming can be raised on fifty acres. I would add a little manure in the fall, then plow deep; in the spring I would plow shallow, and spread the rest of the manure on the surface with a harrow. I am not certain but one acre so prepared would be more profitable than the fifty, when you take into account interest, cost of cultivation, teams and the wear and tear of tools as well as of hopes. I am saying this to discourage large farms; to encourage those of forty acres or less. I am charmed with less; saying so to those who talk of buying farms or of coming

Early Scarlet, McAvoy, Iowa, Kinney's Seedling, Longworth, Neck Pine and Triumph de Gand, form a list from which a selection can be made that will give good satisfaction. Dr. Meeker was at our place the 18th and informed us that the season of this fruit had closed with them on the 16th, making 24 days, though the active time of shipping was only fifteen days. To-day will close the marketing with us, making some fifteen days of active shipment, though the season will linger three or four days more, for family, and giving us about the same number of days when this fruit is in its season, by availing ourselves of the Early Scarlet, but to rely on the Wilson the season would be shorter.

We have a patch of Early Scarlet and McAvoy in the garden, two by twelve rods, that has been in bearing eight years. Alternate strips, some eighteen inches wide, have been spaded up annually and the plants turned under, finely raked and the weeds and grass wed out of the strips of plants not disturbed with the spade. For family use we think this the cheapest and safest mode to be pursued. After the ground is frozen it should be mulched with fine manure or rotten straw; and early in spring rake the surface thoroughly, taking off the dead leaves and trash. This leaves the surface in a good condition, and the plants will make a vigorous growth that will insure a fair crop under almost any condition of the weather; at least we never think of a failure. By this mode of culture we would recommend at least half the space to be occupied with pistillate varieties, and the other half with staminate, such as Early Scarlet, Iowa, and the Wilson.

The Rev. J. Knox, of Pittsburg, finds the hill system the most profitable; his berries are large and command a high price. For this purpose he uses staminate varieties, such as the Triumph and Wilson. Doubtless this is the best for market, as it produces fruit that will command a ready sale at a high price—two points of interest to the grower. The spring is thereby far the best time to set out the plants, tho' any rainy spell during the summer will answer very well; but this time is not to be relied on and should be resorted to only in case of necessity.

We hear large stories in regard to the yield of fruit, but our ambition is very well gratified with fifty bushels to the acre.

Berries are sold by wine measure, or thirty-six quarts to the bushel; this would give eighteen hundred quarts to the acre, which at 15c delivered at the station, would amount to \$270. Deduct 1,800 boxes at $1\frac{1}{2}$ cts, \$27; 1,800 qts., picking at 3c, \$54; leaving to the grower \$189; a sum that should satisfy the ambition of most men, and tend to extend the culture of this fruit. But to attain this result the strawberry must have good culture and be attended to in season.

Small Fruits.

The culture of the so-called small fruits is rapidly extending, and promises within a few years to form an important part of the daily food of all well regulated families. Usually we begin with the strawberry May 25th; currant pies and sauce have for some days given variety to rhubarb; June 10th the May cherry is added; when gooseberries are also in order. The 20th of June

brings us ripe currants and the beginning of the raspberry season. These fruits overlap each other, and fill the season from May 25th to August 1st, a period of over two months. At that time we begin to have apples in abundance, with the early pears and plums; and towards the close of the month peaches, in ordinary seasons. We have purposely left out the blackberry, a fruit so abundant in our timber lands, and so little understood in the fruit garden that we have not given it the place that it so richly deserves. We are making some experiments with this fruit that we hope will succeed in placing it in a higher position.

In the culture of small fruits we all err as to the distance at which the plants should be set. We now set currants, gooseberries, raspberries, blackberries and grapes, in rows eight feet wide; the grape eight feet in the row and the others four. All of these fruits need heavy mulching of coarse manure, such as sorgo begsse, straw, half rotted manure, corn stalks or leaves. We have had a good opinion of shade, but now hold it in less repute than thorough mulching. After the mulch becomes somewhat decayed, it is to be worked in with the double shovel plow. A good application once in two or three years will be sufficient.

The strawberry, if grown in beds, should be spaded up in alternate strips soon after the picking season; or if in hills, be carefully hoed.

The farmer who continues to neglect the planting of the small fruits, will soon be called a niggard, and unworthy the respect of all those who regard the health and comfort of their families.

From the N. Y. Tribune.

The Prairies in Summer.

DONGOLA, Union Co., Ill., June 25, 1864.

STRAWBERRIES IN EGYPT.

Our strawberry season commenced May 20, and ended June 15. It was favorable. We got two dollars a quart for the first shipment, and a dollar a quart, on an average, for the first week. After that it was \$6 a bushel, so far as I could learn. The first were sent to Chicago. I was told that these went to Montreal. The yield per acre did not exceed 30 bushels. The expenses of freight and commission were over \$1 a bushel. Besides, it costs us \$2 a bushel to put them in the wagon at home. On the whole, the profit is not large. One who can succeed in raising strawberries can succeed in almost anything else. It is thought to be a very nice business. It is delightful business. It is delightful to pick what one's family requires, but when one makes it a regular business, and has large lots, it seems to me like running a threshing machine. Still one may save some money, and it comes handy at this time of the year. There is danger, however, of one having his mind so colored up before the crop comes off as to agree to pay away for divers things all he will get.

A NEW FRUIT THIEF.

The pilfering of fruit by express agents and others is discouraging the business. The more rare and costly the fruit, the more certainty of robbery. I have seen them get more than they could eat. I could enjoy something from seeing my hogs eat strawberries and fine pears; there would be a profit in it. One would do well to invent and patent a method which would prevent this robbery. It has become customary to put newspapers around boxes of raisins, but these pirates can get paste. Express companies should look to this. Does any body know where United States mail robbers get the rudiments of their education?

COTTON AND OTHER CROPS.

In Southern Illinois the whole season for all kinds of crops has been favorable. Wheat, corn, oats and potatoes look well. Cotton grows rapidly, and it is two weeks more forward than it was last year this time, and in addition, it is clean. We are digging new potatoes and have had our first cucumbers. The first setting of peas are ripe, onions are ripe, early cabbage is heading out, we have young beets, and there are ripe blackberries. The Carolina June is getting quite red. For eight years we have not had a season so favorable. I report of the rest of the State, for I have just returned from a tour through its whole extent.

A LOOK THROUGH THE STATE.

I went up to Chicago on the branch of the Illinois Central, and came back by the St. Louis and Chicago and the Main Trunk, stopping over at Champaign and Bloomington.

Corn was planted earlier than last year and to a greater extent. It came up well; but north of the Ohio and Mississippi railroad there was no rain, and it seemed as if there would be no corn. I went up on the 18th. I never saw a people so discouraged and gloomy in my life. Many had lost a part of their stock; they had no corn to feed their working teams; hogs had to shift for themselves; even young chickens must live on bugs; they

could not have a kernel. And now the heavens seemed brass; the ground was dusty; of course the corn could not grow. Through Wisconsin the drouth was so great as to affect the price of grain in Chicago, and in some places there corn and oats lay in the ground six weeks without coming up. There were frosts, too. Had the Lord hidden his countenance?

THE CORN CROP SAVED.

On Sunday the 19th as folks were getting ready to go to meeting, all through this whole region, according to the telegraph, it commenced to rain, and it came down heavy all the forenoon. It was an answer to more prayers than had been made in churches, and thousands without religion felt religious gratitude. The corn crop was saved—it was as good as made. Even if there should be frost in August, as there was last year, there will be good corn, for it is two weeks earlier; and, now the weather is hot and sultry, corn never grew faster.

OATS, WHEAT AND HAY.

Oats, for want of rain, will be very short, but perhaps there will be an average crop.

Wheat is fully an average. It is turning yellow even in the center of the State, while here a good part of it is cut and in shock. I have been told by some who have been through central and northern Indiana that the wheat there is much better than in Illinois, and that the area sown is very large. Of course in making these statements, I throw out of the account the fields of many farmers who slobber in their grain. These are the fellows who talk of the fly, of hard winters, and all manner of bugs and things.

Grass really is fine, and how high it is I will tell you. The skeletons of the animals which were turned out early in the spring, and which could not get enough to eat, are hidden by the grass. I could just see the bars made by their ribs. Sometime a good-sized yearling calf goes down out of sight. All day long the cows' milk vessels are shaded. This is remote from towns and where the wild prairie has been fenced in, and in many places where it is common. It seems to me as though there was grass enough on these prairies to feed all the cattle in our country.

THE SORGO CROP AND THE CONTRABAND.

The forwardness of the season is apparent in no crop so much as in that of sorgo, for it permitted early planting, rapid germination, and immediate working of the young plants. These now are strong and well advanced, and in the great race with the weeds, which, since the rain all at once cover the ground, they are certain to keep the start.

Mr. Nason, of the Central Illinois Coal Co., has at DuQuoin about 500 acres of the different varieties of sorgo. The help I saw employed were negroes. They were working faithfully, and, as they hoed, left beautiful hills behind them. Last year some of them did not work well. They were discharged; they came back and were hired over. They didn't know what it meant to be free. Now they understand it and work well. Others worked faithfully. As I passed by and saw these blacks working in the large field, I thought of the picture in Woodbridge's old Geography, where a long row of negroes are at work in the sugar cane. Their garment is a cloth around the middle; their heads

are bowed; the overseer stands by them; he is well dressed; with one hand he holds an umbrella, with the other a whip, the lash of which extends over the negroes' heads. Here is the sugar cane, here is the negro; where is the overseer? Illinois has done something to change this. She changes them by turning them off and hiring them over, instead of whipping them. She pays them \$1 25 a day. He, once a slave, wears clothes enough to make fifty bands going around the middle. His wife is at home, making more clothes and cooking his dinner. His children, most wonderful change, are at school.

WHITE WILLOW FOR THE PRAIRIE.

In the absence of timber on the prairies various kinds have been recommended. The locust and others are killed by borers. The white willow is known to do well, when cultivated they have made good growth. There is no mistake but in six or seven years they will make a fence, and a valuable timber belt. But they have failed when neglected. The sale of cuttings has been large.

CENTRAL ILLINOIS.

A more beautiful or fruitful region is not to be found in the whole earth than the great Central Prairies of Illinois, and from no other region is so much expected at this time. It is true, and I am glad to say it, that in other Western States, the lands are equally fertile, but here is a large solid area completely organized and fully prepared for the demand made upon it. While other regions faithfully will do their part, this is looked upon as capable of producing a clean, net profit which can be wholly appropriated. Upon Central Illinois rests the task of giving the Government the greatest aid, and the rebellion the strongest blows.—Other regions, I say, will do their part, but when you count the demand of northern cities and towns, the waste, the losses, the captures, there will be a deficiency, and Central Illinois is required to make it up, and to send not only increasing streams of hay, grain and beef to our armies, but also to feed millions in the Old World. It can do it. For several years farming has so improved that with the best farmers it has almost become a science. Let me point out some particulars, that those who do not know may profit.

THE WANT OF CAPITAL.

Farmers have labored under two great evils—one of having too rich land, and one of not having capital. Thousands, however, at least, have become forehanded, and all their attention is turned to working their land in the best manner. It is simply impossible to cultivate those large farms without machinery. For several years, a great variety has been introduced; one would be astonished to learn how much has proved useless. Experience is deciding which is best. With many kinds further time is required. I am indebted to Prof. Turner and M. L. Dunlap for much information.

TOOLS FOR AN EIGHTY ACRE FARM.

Farmers with 80 acres require a cast-steel plow, costing \$20; a double A harrow, \$15; a cast-iron roller, in six sections, 20 to 24 inches in diameter, (a wooden one *may* do), which with a planter attached, will plant and roll 15 acres a day; or good work can be done without a roller; cost \$75.—

All-wise Creator has wrought such a universe as ours; its changing seasons, and its plant, and tree, and shrub and flower, for no worthy purpose, is an impeachment of such wisdom. So be sure he might have grown trees bare of leaf and branch, the limbs already sharpened for stakes. The flowers and shrubs might have been potatoes and grain, worth so much in bank bills. And even now, we can be as utilitarian as we choose, raise nothing but what will sell for so much money. We would deem such a life a monotony—a curse.

This spring a friend remarked in town, "I would like to be able to spend \$25 in such things," pointing to evergreens.

"Humph," sneered a bystander, "I had rather have the substantial."

He lives for the substantial! He has a few apple trees, currants, partially put out by others. He has a lombardy poplar or two—cost no money. A few soft maples; grow free in the woods. His hogs and cattle: sell for money. Has a large farm; brings in crops. Has money loaned; brings interest. And so he will live and die. Does not the hog or the ox do as much; and leave as much of a record, so far as adding a mite to the weal of a world's accumulating beauty? He would sell the bread and pork and cheat his very stomach, but for the stern necessity of God's arrangements for sustaining life, and thus add to the substantial of a sordid gain. Things of beauty have no value to him. If he could grow apples on his fence, wood-pile, or cattle's horns, he would never put out an apple tree. If the sunshine was worth a penny a ray, he would live in the twilight for life, as among the substantial.

We grudge no hour's toil we ever expended in joining with the Creator in adding a thing of beauty to the family of the beautiful. Not one weary, aching muscle. Not one drop of sweat. We wish circumstances and means had combined to have aided and added a thousand fold to our labors in this direction. We, too, eat bread and meat, and believe in the "substantial," but we believe in the beautiful and elevating also, and while the hands are ours to use on earth, however gray the head with years, no spring shall go by, God willing, without some tree or shrub, anchored in the soil for aye. From the window where we write, we look out upon the shadow cast by a beautiful thing—a poem of emerald leaf and whispering branch—whose topmost pennons already peep into our chamber window. Near by a Norway spruce and a hemlock are nodding and coquetting with each other as the wind surprises them around the corner. Through the heats of the summer and the bleak desolation of the winter, they will greet us greenly through all weathers. In preparing and filling up, and setting them, we spent a hard half day's work with spade and barrow, and on the *eighth of June* and the thermometer excited at that. But they live on, and an "X" greenback could not purchase them. We once hated the hemlock—its logs which never wore out in the logging field; its lumber and rails with slivers infernal;—but a more welcome and graceful tree lives not. We now look upon and remember it as a thing of the past—an associate and acquaintance of our childhood in the old Empire State, and no "fattening hog" in the West is "substantial" enough to buy it. It is one of the beautiful of God's great family of beautiful things, and shall have a place by our window,

and where its shadow may fall across our door-sill in the years to come.—*Wis. Chief.*

Circular of the American Pomological Society.

In conformity with a resolution adopted at the last meeting of the National Association, the undersigned give notice that its tenth session will commence in the Corinthian Hall, in the city of Rochester, N. Y., Tue-day, Sept. 13, 1864, at 12 o'clock, noon, and will continue several days. All Horticultural, Pomological, Agricultural and other kindred institutions in the United States and the British Provinces are invited to send delegations as large as they may deem expedient; and all other persons interested in the cultivation of fruits, are invited to be present and to take seats in the Convention.

The great annual Fair of the New York State Agricultural Society will be held at Rochester on the following week, so that delegates who desire to do so can attend both meetings, and those who contribute collections of fruits to the Pomological Society can afterwards exhibit them at the State Fair.

Throughout a large portion of the country the prospects of the fruit crop are very encouraging, and as the Fruit Growers' Society of New York will place its entire collection at the disposal of the American Pomological Society, a display of extraordinary interest may reasonably be expected.

Among the prominent subjects which will come before the Society at this session will be that of the revision of the Society's Catalogue of Fruits.

The Special Committee appointed for this purpose are now, with the various State and local committees, actively engaged in collecting such information as will aid in determining what varieties are best adapted to the different sections and districts of our country; and this information in the form of reports, will be submitted to the action of the Convention.

All the States and Territories are urgently invited to be present, by delegation at this meeting, that the amicable and social relations which have heretofore existed between the members of the Society, may be fostered and perpetuated, and the result of its deliberations, so beneficial to the country at large, be generally and widely diffused.

Members and delegates are requested to contribute specimens of the fruits of their respective districts, and to communicate in regard to them whatever may aid in promoting the objects of the Society and the science of American Pomology.

Each contributor is requested to come prepared with a complete list of his collection, and to present the same with his fruits, that a report of all the varieties entered may be submitted to the meeting as soon as practicable.

All persons desirous of becoming members can remit the admission fee to Thos. P. Janes, Esq., Treasurer, Philadelphia; or to the President at Boston, who will furnish them with Transactions of the Society. Life membership ten dollars; biennial, two dollars.

Packages of fruits may be addressed as follows: "American Pomological Society, care of James Vick, Rochester, N. Y."

MARSHAL P. WILDER,, Pres.

JAMES VICK, Sec.

Culture of Buckwheat.

The following article which we copy from the *Utica Herald*, we presume is from the pen of X. A. Willard, Esq., of Herkimer county.

The best soil for buckwheat is a dry, light, sandy loam, but it may be grown on almost any land if properly prepared. As an exterminator of weeds the plant can be employed to good purpose. The daisy, Canada thistle and quack, (switch grass), can be destroyed by plowing in mid-summer, and roasting the roots by exposing them to the rays of the hot sun, while the rapid growth of the buckwheat overshadows and smothers out what remains alive of these pests, more especially if the crop be followed by clover or oats.

The following method has been found effectual in cleansing out quack from grounds overrun with this troublesome grass. Plow in the fall and again in the spring, then harrow at intervals of a week or oftener, as the quack grows up to the middle of June. Sow the buckwheat by the 1st of July, and if the land is not rich use manure, so as to grow a heavy crop of straw; this will smother out the quack. Buckwheat straw if cut before frost, is very palatable to cattle and sheep, and can be used with advantage during the early season of foddering. Many people throw the straw away or pile it up for manure. This is bad economy, as it can be used, and thereby be a saving to the hay mow.

When sown for a fertilizer or for fodder, two bushels of seed should be sown to the acre. As a fertilizer it is not so valuable as clover, but has one advantage, inasmuch as it can be grown on land where clover could not be profitably employed for that purpose. It should be turned deep under the soil while the plants are in blossom, and when used in this way rapidly enriches the land. Buckwheat forms a very good "pasturage for bees," and the apiarian can make it worth while to grow the crop for that purpose. The honey made from buckwheat is inferior to that made from clover, and this is in part compensated by extra quantity and the rapidity by which the stores are gathered. Some years during the clover season it is so rainy that bees are unable to gather their supply of honey. A field of buckwheat may then prove the means of saving the swarm through the winter. Last year was a season of this character, and hundreds of swarms were unable to collect enough food for winter; hence there were immense losses of swarms. But we have observed in several instances when buckwheat fields were convenient last season to the apiary, the loss of swarms was less, and in many cases no more than usual. In Europe the plant is extensively grown as food for bees.

Buckwheat requires care in harvesting to prevent loss from shaking off the seeds, more than any other crop. Some writers recommend cutting as soon as one-third the seed are turned brown; others say two-thirds. If we wait for all to ripen, the earliest and best part of the grain is lost. Perhaps the best plan is to cut when one-half the seed are turned brown; the unripened grain then draws enough nutriment from the straw, which is succulent and juicy, to fill out and mature the grain after it is cut. The most approved method of harvesting is to cut with a cradle, rake the straw into

bundles and set up. It will be often necessary for them to remain in the field for a week or two before they are sufficiently cured. When ready to be carted from the field the grain should be threshed out immediately, or as soon as may be after the loads reach the barn. The maximum yield of buckwheat is from 40 to 50 bushels per acre; from 25 to 30 bushels is considered a fair crop. The success of buckwheat is affected by the weather to which it is exposed in the several stages of its growth. In this state it is more susceptible than any other kind of grain. In growing the crop successfully much depends not only on the general state of the weather throughout the season, but also on the particular time which may have been chosen for sowing. A week earlier or later often makes a very great difference, and yet, notwithstanding this uncertainty the crop, it is believed, all things considered, is one of the most remunerative a farmer can grow.

Stupidity of Farmers.

A great deal of gospel is preached in the world, but few hear, and fewer still believe. It is our humble duty to add line upon line and precept upon precept from time to time. So we shall continue to do, even though not one is saved from the error of his way. We always travel through the country with both eyes open, and the head on a pivot. What a book! Every farm is a chapter; an autobiography, so to speak, of individuals.—Many dwellings (?) have around them but little of the ornamental; some pigs, geese and hens. Others have a few currant bushes generously fed on—grass. Others have more pretensions to taste—some trees and shrubs thrust stake-like into the sod, and trying to live under the infliction. Some farms have splendid residences, finished elaborately, glaring in white, and not a shrub of small fruit within sight! What a place to stay. No "strawberry patch" with half hidden fruit; or raspberry bushes with their deftly hidden dainties, no plums to hang from the budding branches; no cherries to tempt the taste; no—nothing! The man will show his house, his horse barn, hog pen and tenants, etc., and flatter himself that he is one of the "good livers!"

A thousand such dwellings would not tempt us. He is a fool who builds such a house, and so ignores the good gifts which God has vouchsafed to all. The country is full of such, however, and of such farms and dwellings.

Sugar from the Butternut.

The Farmer's Club, of the American Institute, New York, is one of the best practical associations in our country, having for its object the discussion of the every-day occupation of the agriculturist.

At the meeting, April 19th, among the subjects of discussion, we notice "Sugar from the Butternut tree." The President, while discussing the matter of maple sugar and its production, remarked that as much sugar could be made from the Butternut tree as from the Sugar Maple, and the President gave it as his opinion, that the flavor of the former was preferable.

Why do not our farmers plant forests of Sugar Maple and Butternut trees also? Why do not our

land owners take a hint? A hundred acres of Sugar Maple planted here ten years ago, would have been worth a princely fortune now.—*Cal. Farmer.*

The man who would plant the Butternut for sugar will wait until he can cut the tree into boards, sell them to the cabinet maker, and exchange the solid cash for sugar—that is all the time necessary to get sugar from the butternut, and the simple *modus operandi*. We have for a long time been aware that the Farmers' Club of New York has been a great institution, but had supposed that they ran more to vegetables and the small fruits, and must acknowledge our gratification in their solution of the sugar question on such a simple basis. The Butternut is alike valuable for sugar making and as a stock for the peach. Could we not make the Lawton blackberry hardy by grafting it on the Buckthorn? Will not the Club enlighten us.—*Ed.*

Sending Seeds and Plants by Mail.

The last act of Congress in authorizing the sending of seeds, plants and cuttings by mail at a low rate of postage, is one of no small importance to the great mass of the people, extended as they are over so wide a district of country. It is often difficult in many parts of the country to procure fresh garden seeds, cuttings of rare trees, and new and valuable plants, and to order them by express, even on express routes, the charges in many instances will exceed to several times the value of the things ordered. But the late act of Congress authorizes the sending of seeds, cuttings, &c., at so low a rate of postage as to bring them within the reach of all. The law specifies "*seeds, bulbs, roots and scions*," which may be sent in packages not exceeding *four pounds* in weight, the specified limits of the law, at a rate of postage of *two cents* for every *four ounces*, or the same for any additional fraction of four ounces, *prepaid* by stamps.—Formerly these things were subject to letter postage, and were generally put up in oiled silk, which is quite expensive, but since the reduction of postage this mode of carriage has been extensively adopted so that paper has been prepared to render it impervious to water and air, and is now sold at comparatively low prices. This paper is prepared by giving it a coat of boiled linseed oil, with a small quantity of dissolved India rubber added.—Those who wish to prepare paper for their own use can make an article equally good by giving it a coat of linseed oil, and when dry or nearly so, give it a coat of shellac dissolved in alcohol, reduced to the consistence of common varnish. Fine manilla paper should be used. To insure the safe transportation of plants in the mail, the roots should be protected with a covering of half an inch or an inch in thickness of swamp moss, or that gathered from the logs or rocks found in deeply shaded woods, and on the north sides of steep hills. The moss should be made moderately damp, and spread out upon the paper of suitable size, and with a small portion of the moss mixed among the roots. The whole is then rolled up snugly and tied, and then again covered with a wrapper of common post office paper, to receive the directions and marked "*Seeds*," or "*Plants*," as the case may be.—*Iowa Homestead.*

Miscellaneous.

Why not take an Agricultural Paper?

Is not the subject one of sufficient importance to interest you? Is not the practical experience of other farmers of value? Have you attained that degree of perfection in farming that you cannot farther improve by your own or the experience of others.

You answer these questions, except the last in the affirmative; but you say, "I have not time; if I get time to read the current news of the day, I think I do well."

But is not agriculture of sufficient importance compared with politics and passing events, so as to give it at least one thirtieth of your reading time? When my boy comes from the postoffice with the newspapers and the *Valley Farmer*, I sit down and read the last named periodical first, and for the following reasons:

1. Etiquette requires it. If you have two or more visitors, one only able to call once a month and the balance calling once a week; the former able to give you practical advice in your business, whereas the others only able to amuse and instruct—if these Mr. Weeklies are men of sense, they will excuse you for taking a preference to the conversation of Mr. Monthly, they knowing that when he is absent you give them your undivided attention.

2. Interest requires it, because you may get a practical idea, that you can in your business improve by even the next day; whereas if a train of cars has run off the track, a steamboat or building destroyed by fire, through the carelessness of others, you could not help it. It may to certain parties be a severe calamity, but the knowledge of it to others is only valuable as one of those lessons of experience by which we may profit.

3. Labor is saved by it. A thrifty farmer has labor daily of a twofold character to perform:—mental—to plan; physical—to accomplish; his success depends as much on the former as the latter. In a practical, agricultural journal, ideas can be gleaned to save much of the former, and occasionally much of the latter.

Lastly. Success requires it. The great secret of success, coupled with energy, is: 1. Understand your business; and 2. Mind your business.—*Cor. Valley Farmer.*

CONVENTION OF PLOW MANUFACTURERS.—Pursuant to adjournment, the Plow manufacturers of the Northwest assembled at the Tremont House in this city yesterday afternoon, for the purpose of organizing a Plow Makers' Society.

The following firms were represented in person: John Dement, Dixon, Ill.; Wm. Tobey & Co., Peoria, Ill.; Deere & Co., Moline, Ill.; Ingersoll & Goodrich, Morris, Ill.; T. D. Brewster, Peru, Ill.; Winchester & DeWolf, Whitewater, Wis.; W. B. Young & Co, Chicago, Ill.; Furst & Bradley, Chicago, Ill.; Buford, Tate & Co., Rock Island, Ill.; Andrus & Cummins, Grand de Tour, Ill.; T. & H. Smith & Co.; Pekin, Ill.; Parliu & Orsendorf, Canton, Ill.; Battell & Boyd, Quincy, Ill., W. T. & E.

West. To large farmers here I have nothing but encouragement; they or their boys are seated on their cultivators taking long, hot journeys, and they are really doing a noble work. Still they are only half farmers; the other half is the land speculator. Bless their large hearts; they intend a part for their boys and girls, and I am certain the boys and girls will get them. Nor will they be worse for it.

One word more about corn these passing days. Don't bank it up—don't. Work the ground level. Keep the surface mellow and free from weeds. It is too late now to work deep. When the brace roots start, there is no more to be done. If there are weeds go through with the hoe, but keep out the cultivator. You had better burn your plow to ashes and old iron, than to be running through your corn, ripping up the brace roots. In the early stages of corn the plow or cultivator cannot go through it too often. In the latter stage they should not go through at all. N. C. M.

Dr. Mecker is a close observer, a truthful writer and withal a practical, plain, everyday farmer.—Our readers will therefore ask no apology for the space so well occupied.

The reader will be somewhat surprised in the Doctor's strawberry experience.

About Evergreens.

That mattock does get so heavy and the hands so weary! Then, too, the sun is on the rampage, and the strong wind from the southwest is like the breath from an oven. The sweat drops from the brow, and it is voted to retire within our entrenchments for one hour, and dream of a day when this group of evergreens shall lift their pyramids of luxuriant beauty skyward, in reward for this toil.

When this group of evergreens was put out, the press of other work called us from a full completion of the labor necessary to the largest success. We gave them holes three feet in diameter, and two feet deep; set them in fine, rich mold, with the promise of making the hole "all over" and mulching them generously, when it should rain.

But the rain comes not. So we wheeled up twenty pails of water, added a heavy wheelbarrow load of mulch, and then applied the mattock with faith and zeal, giving the group a cultivated strip six feet in width.

"Dear me, who would ever dig so much for evergreens!" You would not, probably, but we would—we do. And the reason is simple. If they are worth setting, they are worth setting well.—We set them to have them live and grow rankly and beautifully; not to linger feebly and die at last. While hundreds we have noticed this spring, just put out, are departing this life, ours are taking hold of the soil with a will, and putting out their delicate new growth as if "at home."

Four years since we put out some evergreens, and the "vagary" furnished some wise ones a fine opportunity to say smart things. "What a fool!" May we remain a fool in such matters. Would that our wise friends would exhibit a little of the same folly. Some of the trees then put out are now eight and ten feet high. Greenbacks could

not buy them.

It is not true that it is a difficult matter to make evergreens live. Properly lifted, treated and set, they are as sure as the apple. Torn up, roots dried up, stuck in the turf like a post, and never mulched, they are sure to—die. And they ought to.—They resent such barbarism.

Here, sir; you think a rootless evergreen can grow and feed in sward. Take the mattock and try a few square feet of this, thoroughly dried in weeks of sun. It is almost as hard as brick, and almost as destitute of moisture. To think of taking out a few spades of such soil, and expecting an evergreen to live!

Nurserymen are not always to blame for the death of trees. They weary of preaching a gospel to people who will not heed it. The latter obtain their evergreens, and with the least possible trouble get them into the ground. This spring we met a man with evergreens in hand, not an ounce of dirt on the roots, or anything else, the sun and wind doing their work at leisure. The man will think evergreens a failure!

Evergreens should be lifted with as much dirt as possible, and if going far, carefully packed in moss, or what is better each one put up in a sacking, put out with care and generously mulched. Humanly treated they are *sure to live*. Those who cannot so treat them, no business to set them. If they do they deserve to lose them.—*Wis. Chief.*

Just so; the sun and wind and want of elbowgrease are killing the newly set evergreens. In driving thro' the village we can see them, in passing by the farm they hold out their crisped up leaves. We had sold three larches of large size some ten feet high; two are dead and the other will die. The same day we set three of the same size in our ground; two are growing finely and the other is starting with new vigor. All will make a fair growth.—The six trees were planted in turf, ours mulched and watered. But the roots were not dried while the man was digging the holes.—Ed.

The Useful and the Beautiful.

"I am so much of a utilitarian, that I can see no practical value in such things."

We were discoursing to a friend about evergreens; about surrounding the home with things of beauty, and making it as attractive as possible. This, we affirmed, was but a just acknowledgement of the goodness of God in filling the world with these beautiful things, and a duty we owed to our children, friends, and to society. If not for beautifying and rendering attractive to the eye and to the thought, what were all these things created for? If an undevout astronomer was mad, what shall we say of an undevout husbandman or horticulturist? Are all things beautiful, valueless?—Has the Creator so blundered that He has filled a universe with things to please and attract, without plan or purpose? The seed; the casting into the ground; the germination and the fulfillment—is not the whole process a miracle? Men often doubt the miracles of sacred history. Yet they live in the midst of miracles. The concentrated genius, skill and perseverance of the human race, could not perform one of the least of these. That an

A. Rogers, Quincy, Ill.; J. H. Wood & Co., Warsaw, Ill.; Pratt Moorbery, Morton, Ill.; Joseph Maithoper, Ottawa, Ill., Elliss & Dangerfield, Jacksonville, Ill.; and Barber & Hawley, Decatur, Ill.

John Dement was called to the chair, and L. G. Pratt chosen Secretary.

The constitution reported by the committee appointed at the last meeting, was accepted, and permanent officers elected, as follows:

President—John Dement.

Secretary—Charles H. Deere.

Treasurer—David Bradley.

T. D. Brewster, T. Cummins, and D. E. Buford were appointed a committee of arbitration.

The following were adopted:

Resolved, That the prices of all steel plows, excepting cultivators, be advanced not less than 25 per cent. over the present printed price list, as near as may be, avoiding fractions.

Resolved, That the discount to the trade shall be from 20 to 25 per cent. from list price.

Resolved, That the price of wheat cultivators be advanced ten dollars from the present list prices.

Resolved, That the discount on wheat cultivators shall not exceed 25 per cent.

The proceedings of the convention were marked by the utmost unanimity, and very little discussion was needed in arriving at the conclusion announced above. After the transaction of some other minor business the meeting adjourned.

The above will not be pleasant news to our farmers in want of new plows. Old plows will be brought out and tried again; new shares and handles will be sought for, and the lame and halt among plows made to come forth to resume duty. We have a small museum of old plows, but they won't come at our bidding. The new cast cast-steel of Deer is in the way and the boys say nothing else will make a good furrow, run easy for the team and scour under all conditions. It is evident that we shall lose largely by thus prematurely getting the cast cast-steel on the old plows. Well, we hope to survive the loss.—Ed.

FRUIT STEALING.—A farmer and fruit raiser in Western New York, gives his experience in fruit raising as follows:—I have four thousand peach trees in bearing condition, besides apples, pears and other fruit—all of which are exposed to being stolen, but my firmness in carrying out my designs has been a preventive against having my fruit stolen or disturbed by any such persons as have a disposition to take that which is not their own. At the ripening of my first crop of fruit, being somewhat annoyed, I determined to plant a complete osage orange fence around my fruit grounds as a protection as well as a fence; but I am now happy to say, that an occasional walk around the premises, at different hours of the night, using without hesitation good firearms, is a safer preventive against thieves.

This is a pretty peremptory mode of scattering fruit thieves; but unfortunately sometimes nothing will prove effective. In this and the near counties, we have a law for the protection of our premises—our orchards, gardens, yards and crops; and

the punishment of a detected fruit stealer or garden trespasser may be the common jail. One or two examples in a neighborhood would thoroughly protect it against these reckless marauders, and we trust that in every instance where the thieves are discovered or can be ferreted out, the law will be rigorously put in force.—*Germanstown Tel.*

We have a pretty effectual law in this State against fruit stealing, but thus far have not heard of its having been put in practice further than to hold it up to the petty vagabonds. Yet this, of itself, has been of great value in numerous instances. We shall have no hesitation in using it when occasion requires. Osage hedges are only a fancied security, not half as valuable as that of the Dutchman's above described.—Ed.

GRAPE CULTURE.—Mr. Knox thinks grape culture has been injured by its friends, who advise great expense in preparing the ground; some advise to stir the soil three and others four feet deep. This is a useless expense, and positively injurious to the vine. Fifteen to twenty inches is as deep as the soil need be stirred. If worked much deeper, and manured heavily, the vines grow too rampant. Beginning with the newly planted vine, he cuts back to two or three eyes. The second year he cuts out all but one cane, and the next fall cuts that back to three eyes. These produce three strong fruiting canes for the third year, two of which are bent, to form the arms, and the middle one trained upright. The trellis is not erected until the third year. The vines will each mature ten pounds of grapes the third season, and throw up canes for future fruiting. The process then consists in cutting out each alternate upright shoot every year, which leaves four bearing and four growing canes to each vine—the vines being six feet apart, and the upright about nine inches distant and eight feet long. During the summer the new growth of the spurs is pinched in, retaining as many leaves beyond the last cluster as there are clusters on the spur! Arms, he thinks, do not afford sufficient room for our rampant growers. That if left to themselves, would cover a tree 100 feet in height. Prunes in November.—*American Agriculturist.*

FAIRBANKS' SCALES.—About thirty-five years ago, the Messrs. Fairbanks invented and began making platform Scales, which effected a complete change in the manner of doing such business as requires weighing, and without which it would be impossible to do the present amount of business in the country. Since then they have given their constant personal attention to the business, making all such improvements and adding such modifications as their experience has shown to be desirable. During this time many other kinds of scales have been invented, and more or less tried by the public, and mainly thrown aside, while the business of the Messrs. Fairbanks has steadily increased from year to year, their scales now standing higher in public estimation, and their sales being very much larger than ever before. This shows very strongly the excellence and durability of Fairbanks' Scales.

BERRY CULTURE.—The West Jersey Fruit Association reports that in 1863, there were 200 acres under strawberry culture in Burlington, 47 in Chester, and 25 in Cinnaminson—total 272 acres, yielding 12,596 bushels of fruit, and sold for \$45,345 60, an average of 46 bushels to the acre. One crop is reported from Chester of Hovey's Seedling and Lady Finger, 8000 quarts on a fraction less than $1\frac{1}{2}$ acres, or at the rate of 166 bushels per acre. Of the Raspberry, there were 40 acres in the same townships producing crops, yielding an average of 33 bushels per acre, and sold for \$4 64 per bushel; and of the Blackberry, 99 acres in bearing, yielding 53 bushels per acre, sold for \$3 30c per bushel. The three towns sold these three kinds of berries to the amount of \$70,000 last year.—*Boston Cultivator*.

It will be seen from the above that the small fruits will pay. Another point we would call attention to, is the yield being an average of forty-six bushels to the acre of strawberries. We hear some wonderful stories in regard to yield, but these may be put down as rather fishy, and, at present advices, the average yield under good culture, may be put down at fifty bushels, and those planting may as well take this as a base of their expectations.—Ed.

MANURING.—Mr. Patten, of Hightstown, N. J., informs the *Country Gent.* that one-third of a field in strips, received an autumn dressing of manure at the rate of about 12 or 15 loads to the acre. A second portion was manured in the spring with an equal quantity, and a third was dressed with guano, at the rate of 300 pounds to the acre. The crop on the fall manured part was about three times as good as on that manured in the spring. The guano gave an intermediate result. The second year guano was applied over the whole, and the third year the land was left in grass. During both the second and third year the growth on the autumn-manured portion was decidedly the best; the 2d best was on that which was guanoed the first year; and the poorest of all was on the spring-manured portion.

We are obtaining proof upon proof of the value of top dressing our lands, instead of plowing in the manure. Look to it that you top dress every acre of meadow as soon after mowing as is possible; that is the place to put your spare manure. In this way a crop of grass is always reliable, drouth or no drouth. Try it, you who have light meadows.—Ed.

SEVENTEEN YEAR LOCUSTS.—The Locusts continue to charm us by their melody. They are also making industrious preparations to perpetuate or reproduce their kind in due time, by the deposit of millions of eggs, in the limbs of forest or fruit trees. This they do by making an incision in the wood, with a horn which they carry underneath, them, and which they thrust deep into the timber, selecting limbs from one-fourth to one-half inch in diameter. The incision is made ob-

liquely, raising portions of fibre, underneath which the eggs are deposited, when the operation is repeated. If the nearest fraction of these deposits developes into locusts, there is no danger that the race will become extinct.

Where these incisions are too thickly distributed, the tree withers and dies, but these cases however, are rare in this locality.

There is a diversity of opinion in relation to these pests, when many aver are wrongly termed, locusts. Some believe them to be harmless, while others have heard that their bite or sting, it is not very clear which, is a deadly poison. We have heard no well authenticated cases of their having bitten or stung any one this year, and from the examination we have been able to subject them to, are satisfied that they are harmless in this direction.—*Berlin (Wis.) Courant*.

DROUTH IN WISCONSIN.—"Our drouth" is becoming a serious matter. The thoughts already reach ahead and grasp the question of "bread for the million." We hear of showers in localities, but there has been no general rain. At the present time of writing—23d—the morning opens cloudless, and the sky has that peculiar appearance which reads of a day of "furnace heat." We have frequent tableaux of clouds, but they mock the weary, watching gaze, and disappear.

Widespread damage to crops is already the result. A vast breadth of wheat, barley and oats, is beyond the reach of rain. Most meadows are ruined. The prospect is gloomy for large masses of our people.—*Wis. Chief, June 15*.

CURTIS' PRAIRIE MOWER.—This is a new machine in this section. It has been introduced at the West and is a very popular machine there. We saw it operate upon a field of clover, and it performed its work well with a very light draught. It is manufactured by E. A. & G. R. Meneely, West Troy.—*Jour. N. Y. Agricultural Society*.

ORIGIN OF MULES IN THE UNITED STATES.—Up to the year 1773 there was scarcely any mules to be found in the United States—those few had been imported from the West Indies, and were of a very inferior order.

When Washington returned to private life at Mount Vernon, he became convinced that mules would be better adapted for use in the agriculture of the Southern States, as they lived longer, were less liable to disease, require less food, and were more economical than horses.

On his views becoming known to the King of Spain, he sent him a jack and two jennies. The jack was sixteen hands high, of a grey color, heavily made, and of a sluggish disposition. About the same time he also received a jack and some jennies from Lafayette, which were procured on the island of Malta. These proved more ferocious and active. By crossing the breed, Washington availed himself of the best qualities of the two, and thus introduced excellent mules for farming labor into this country.

Such was their superiority, that at the sale of the General's effects, one wagon team of four mules sold for \$800. At this day these animals are extensively used in the Southern States.—*Ex.*

Correspondence.

The White Willow Controversy.

BLOOMINGTON, ILL., June 27, 1864.

M. L. Dunlap, Editor Illinois Farmer, Champaign Ill. :

Herewith please find copies of the replies of Messrs. Minkler and Galusha, in regard to that white (or swamp) willow business. If convenient please publish. Truly, F. K. PHOENIX.

[Here follow two letters of O. B. Galusha, one of which we have already given, and the other of later date is in substance a repetition.—Ed.]

S. G. Minkler writes June 18th, as follows:

"I received your letter about the white willow yesterday. You use the word *swamp* willow; I never used the word. I said you cut a large quantity at Peoria Lake. My authority is one of the employees of the I. C. R. R. He said it was sent down that road to Bloomington. Now, if you never shipped any willow in that direction, then the thing was made out of whole cloth. I think he had no interest in the matter anyway, for the conversation was like this: "Are you doing anything in the willow?" I replied, "No." He said Phoenix was shipping two car loads per day or week, I will not be positive which. He further stated that he (Phoenix) had a large number of hands cutting at Peoria Lake, and it came to the I. C. R. R. from Peoria. And so I told Mr. Bragdon, and also Mr. Galusha. Further than that Mr. Galusha has nothing to do in the matter.

Yours respectfully,

S. G. MINKLER."

—The mystery grows deeper the further we look into it. At first sight the case looks plain. Mr. Phoenix is accused of shipping two car loads a day or week, and cutting them at Peoria Lake. Now, the inference is natural that the willow at Peoria Lake is native willow. How easy in this connection for Mr. P. to have solved the whole mystery and told us that at Peoria Lake is a large plantation of white willow, that he purchased and had shipped, or that he had purchased what was represented to him to be white willow, or any other state of facts; but on the contrary Mr. P. chooses to be silent, and to leave the public to draw their own conclusions, and he need not be surprised if some of them are drawn unfavorable to him.—There may be some strategy behind this that we cannot see—some denouncement that shall take us all by surprise.

Our own explanation of the matter is this: that Mr. P. purchased white willow cuttings at Canton,

in Fulton county, and shipped them at Peoria.—We have no knowledge of this, but merely infer it from the fact that at that place the Messrs. Overman get their supplies, and that large trees exist thereabouts, and that large amounts have been sent thence; and there is no reason to suppose that Mr. P. did not deal largely in the Fulton Co. willow. We are unwilling to believe that Mr. P. knowingly had cut or purchased any swamp willow, and yet from the letter from Mr. Minkler and his reticence in the premises, a contrary conclusion might be drawn by the reader; and did we not know that there was a large amount of white willow in Fulton Co, and that Peoria was the nearest point of shipment, we might also be led into the same error. When it was so easy to explain the whole matter we regret that Mr. P. did not see fit to do so, and thus end the mystery.

We will say a word in regard to Mr. Minkler whom we have known for several years. No man stands higher among his acquaintances; straight forward in his dealings and truthful in his statements, we do not think he would knowingly say a word to the disparagement of any one. At the same time humbugs and petty swindles are not his favorites.

We shall be pleased to publish any statement Mr. P. may choose to make in the premises, more particularly as from present appearances he is the only one that can do it satisfactorily to all concerned. Had he done so with Mr. B. when the subject came up between them, nothing more would have come of it. As the matter now stands many persons will conclude that some one has the wrong willow.—Ed.

Watching the Bees.

We wintered sixteen out of eighteen hives of bees. The two dead swarms were small, and, on account of the early frost, did not fill the hive with comb. But few of the swarms had a sufficient supply of honey, and from one to two months were fed with melted sugar. This was poured into old comb and placed in the upper chamber of the hive.


So soon as the apple blossoms began to open new era dawned upon them and they all made honey rapidly. Never were bees more active. The old comb was filled and in a few days they began to fill the drawers. But we had committed one serious error in not giving them a good supply of unbottled rye flour, to aid them in breeding, so as to enable them to swarm early. It was not until May 25th that the first swarm appeared; this and a succeeding one left for the woods, not having been carefully watched.

We have the old pattern of the Langstroth, the Phelps, which is nearly the same thing, and various box hives, some of them gotten up in a hurry by unskillful carpenters. They stand about the lawn singly, some with the bottom board resting on the ground, and some on blocks four to six inches high; some are well sheltered by evergreen and other trees, and some of them stand out nearly fully exposed, generally just where they were hived.

We decided to become a little more attentive and to get up the apiary on a more expensive if not a better plan, and began by ordering half a dozen Langstroth's hives, of the new pattern, of R. C. Otis, Kenosha, Wisconsin. These came in due time and we are much pleased with them; so much so that we have ordered another half dozen. We will not stop to describe them now, but will do so at a future time.

In the next place we concluded to put the new swarms in a bee house, so as to give them good shelter, and to this end adopted the plan so long and so successfully pursued by Dr. L. S. Pennington, of Sterling, with a slight modification; that is, we would put only eight or nine hives in one house. The house is sixteen feet long, four high in front, five in the rear and four deep, the roof being the lowest in front. The roof boards are cut five feet and four inches long, making three lengths from a sixteen feet board. The hives rest on a two-inch plank floor, the width of the house and one foot from the ground. Into this we put four new swarms, placed close together, but soon found that some of them were disposed to be knavish, and on our return yesterday, July 7th, found one of the swarms had been robbed and the bees incorporated into other hives. This morning the same game was beginning to be played on another hive, where the drag out system was in full operation; but the entrance was at once closed to the width of one bee at a time, which will enable the attacked hive to hold out against the intruders.

For some weeks we have had a supply of the best of honey, whereas our neighbors, who have the bee gums and large box hives, have not thought of such a luxury. From the abundance of young bees we shall expect a number of swarms within a few days; and, though late in the season, yet with the aid of half a dozen acres of buckwheat sown for honey and griddle cakes, we shall hope to get up a respectable stock of bees and an abundant supply of honey.

 The postal regulation allowing "book manuscripts and proof sheets" to be forwarded at the rate of two cents for four ounces does not include MSS. for periodicals nor communications for newspapers, as some contend.

The Franking Privilege.

DEPARTMENT OF AGRICULTURE)
WASHINGTON, D. C., June 20, '64.)

Editor Illinois Farmer—Dear Sir:

The following is a copy of the law recently passed by Congress, restoring to this with other Departments the full franking privilege, by which it will be seen that no prepayment of postage is required in addressing small parcels, seeds, cuttings, &c., to this Department:

1. PUBLIC—No. 82.

AN ACT in relation to Franked Matter.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That all communications relating to the official business of the Department to which they are addressed, of whatever origin, addressed to the Chiefs of the several Executive Departments of the Governments, or to such principal officers of each Executive Department, being heads of bureaus or chief clerks, or one duly authorized by the Postmaster General to frank official matter, shall be received and conveyed by mail free of postage without being endorsed "Official Business," or with the name of the writer.

Approved June 1, 1864.

I will thank you to make this as public as possible. Very respectfully, yours, &c.,

ISAAC NEWTON,
Commissioner.

SWARMING BEES.—Mr. Langstroth mentions that he finds that bees when swarming, can be determined to some "selected" spot. He speaks of stringing bees on a thread, making a ball the size of a hen's egg, and carrying it among the flying bees—that the Rev. T. P. Hunt says, by this device he can always prevent bees leaving the premises. Mr. L. says "A black woollen stocking or piece of cloth, fastened to a shady limb in plain sight of hives would probably answer a good purpose."—That swarms are attracted to such places not only by the color but by the ease of attaching themselves to such objects. It is well known that places selected by first swarms, are very apt to be chosen by those that come after. That when one swarm is followed in quick succession by others, that they are very liable to cluster all in one location. Analogy would then lead us to suppose that the bee-keeper who furnishes imitation clustering devices, at convenient points of the apiary, would be rewarded by having his swarms settle where they can be easily secured or hived.

Mr. Solomon Sawyer, of Rolling Prairie, Wis., informs me that he has had good success with a decoy made of black felt hat, shaped like a cluster of bees, about the capacity of a pint, stuffed and hung in the limb or a tree or small shrub, in plain sight of his hives. That most of the swarms settled on these devices. They should be made so as to be readily detached from their location, so that they can be carried and shaken, or laid at the entrance of the hive. If such or similar devices, succeed, the securing and hiving of natural swarms will be much simplified.—*Cor. Conn. Gent.*

Paper from Corn Husks.

For many years the Austrian Government have encouraged a series of experiments made to test the value of Indian corn husks for making paper, and from the manufactured samples we have seen it appears that so far as the practicability is concerned, the scheme has been successful.

It is apparent that some substitute for rags is very much required, for the supplies are yearly becoming scarcer; more particularly since the war, when the cotton market has been so scantily filled. Certain kinds of the softer woods are now used to a great extent in the manufacture of paper, and the peculiar machines and processes necessary to work this substance have been brought to great perfection; and wood paper may in time supply a portion of the demand for the ordinary purposes of business at a cheap rate.

Paper, it is well known, can be made from a variety of substances; but the cost of manipulation is in many cases too great to make them available. It is one objection urged against the use of corn husks for paper that the stock commands at this time a very high price, seven or eight cents a lb. simply for use in mattresses, and that if brought forward as a substitute for rags, the demand would run up the price immediately. Be this as it may, the Austrian Government now makes paper of a superior quality from corn husks alone, and puts it in the market against rag paper. The Government has an advantage which paper makers in this country have not, and that is in being able to purchase rags at first hands, so to speak; the great ports from which they are sent to this country are chiefly in Austria or the immediate vicinity. There are, moreover, other points in the manufacture of paper from corn husks which render an investigation into its value important. The process of reducing the pulp or fiber from which the paper is made, leaves the stouter fibres or skeleton of the husk uninjured, and these are easily woven into strong, stout cloth, or a fabric resembling crash towelling. Still another resultant, besides the paper stock and fiber is obtained. This is the starch contained in the husk, which is all saved, pressed into square cakes, and afterwards ground into flour from which bread has been made. It is not desirable for this use here, it is certainly valuable for feeding animals. It is therefore clear that the corn husk is capable of a variety of uses, and it is important that it should receive serious attention. It is not reasonable to suppose that the Austrian Government are spending time and money in the pursuit of a chimera, and if it can be made an article of commerce in that country, there is no reason why we too should not reflect upon this subject.

If we sleep upon mattresses made of husks, it is plain by intelligent management we could turn the material to much better advantage, and use the fibers for bags; we may extract the life supporting principle, and set free the paper stock to go abroad to our countrymen in the shape of weekly journals, and yet have mattresses from some other and cheaper material.

These are not schemes which we have briefly alluded to, but only an incomplete record of the uses to which the Indian corn plant is now put in Austria. Rolls upon rolls of cloth are manufactured annually, and it is both stout and strong; a sample

can be seen at this office. The great question to be looked at is simply—Will it pay? The obvious inference is that if the Austrian Government finds it advantageous to foster establishments for using corn husks in this manner, manufacturers in this country may at least examine into it with profit. If it shall be found (and we are sanguine it will) that corn husks can be put to better uses than feeding cattle or stuffing mattresses, a very great field is open for the development of a new source on individual and national wealth.—*Scientific American*.

Corn husks can be sold at three cts. a pound, with a good profit. Our plan is to pick, or *jerk* the corn, put it in the barn, and in bad weather or evenings, husk it; spread the husks in the same loft to dry, and when dry run them through a threshing machine. A railway power with separator is the best for this use.

When the corn is cut up and shocked a good husker will save about one hundred lbs. per day of husks. Of course the number of bushels husked will be much less than when the husks are not saved.—Ed.

Ice-Period in America.

The last number of the *Atlantic Monthly* contains an article by Prof. Agassiz on the glacial epoch in America. Remains of tropical plants and animals found in the rocks of the polar regions prove that at one time the heat of the tropics extended over the whole globe, but at a period long subsequent to this—long even as geologists reckon time—the temperate zones of the earth were far colder than they are at present. The glacial epoch was next to the last before the advent of man, while it was preceded by forty-one others that have been examined and named, and perhaps each of these was as long in duration as itself.

In his article in the *Atlantic* Agassiz presents the proof that at the glacial epoch the continent of North America, as far south as the Ohio river in its middle portion, was covered with a mass of ice six thousand feet in thickness. This vast field of ice was constantly moving southward with a slow motion, but with irresistible power, crushing the rocks, grinding down the hills, plowing furrows through the ledges, and covering the continent with a confused mixture of sand, gravel and boulders.

This burying of the continent in ice to the depth of more than a mile, destroyed of course all life, both animal and vegetable, and through long ages of solitude and desolation of an Arctic winter prevailed over the land. After a time the returning warmth of the earth melted away the ice, and the retreating glacier was slowly followed by springing plants, and by swarms of insects, birds and quadrupeds.

Agassiz thus presents the evidence of the glacier's thickness, extent and use:—

"The slopes of the Allegheny range wherever they have been examined, are glacier-worn to the very top, with the exception of a few points; but these points are sufficient to give us data for the comparison. Mount Washington for instance, is over 6900 feet high, and the rough, unpolished sur-

face of its summit, covered with loose fragments, just below the level of which glacier-marks come to an end, tells us that it lifted its head alone above the desolate waste of ice and snow. To this region, then, the thickness of the sheet cannot have been much less than 6000 feet, and this is in keeping with the same kind of evidence in other parts of the country; for, wherever the mountains are much below 6000 feet, the ice seems to have passed directly over them, while the few peaks rising to that height are left untouched. And while we can thus sink our plummet from the summit to the base of Mount Washington and measure the thickness of the mass of ice, we have a no less accurate indication of its extension in the undulating line marking the southern termination of the drift. I have shown that the moraines mark the oscillations of the glaciers in Europe. Where such accumulations of loose materials took place at its terminus, there we know the glacier must have held its ground long enough to allow time for the collection of these *debris*. In the same way we may trace the southern border of our ancient ice sheet on this continent by the limits of the boulders; beyond that time it evidently did not advance as a solid mass, since it ceases to transport the heavier materials. But as soon as the outskirts of the ice began to yield and to flow off as water, the lighter portions of the drift were swept outward; and hence we find a sheet of finer drift-deposit, sand and gravel more or less distinctly stratified, carried to greater or less distances, and fading into the Southern States, where it mingles with the most recent river deposits.

"One naturally asks, What was the use of this great engine set at work ages ago to grind, furrow and knead over, as it were, the surface of the earth? We have our answer in the fertile soil which spreads over the temperate regions of the globe. The glacier was God's great plow; and when the ice vanished from the face of the land, it left it prepared for the hand of the husbandman. The hard surface of the rocks was ground to powder, the elements of the soil were mingled in fair proportions, granite was carried into the lime regions, lime was mingled with the more arid and unproductive granite districts, and a soil was prepared fit for the agricultural uses of man. Therefore I think we may believe that God did not shroud the world He had made in snow and ice without a purpose, and that this, like many other operations of His providence, seemingly destructive and chaotic in its first effects, is nevertheless a work of beneficence and order."

Legal Protection of Sheep.

An important law, having for its object "The protection of Sheep Husbandry," was passed at the recent session of the Legislature.

It provides that every owner of a dog in the State shall annually "on or before April 30, cause it to be registered, numbered, described and licensed, in the office of the city or town clerk where he resides, and shall cause it to wear around its neck a collar distinctly marked with its owner's name and the registered number, and shall pay for such license two dollars for a male dog, and ten dollars for a female dog."

The clerks are to retain twenty cents on each license, and the balance is paid into the county treasury. Whoever keeps a dog contrary to the provisions of this act shall forfeit fifteen dollars, to be recovered on complaint, and the money to be paid into the county treasury. The assessors are required to take an accurate list, on the first day of May, annually, of all dogs owned or kept, with the owners' names; and the mayors of cities, and chairmen of the selectmen of towns, shall annually, within ten days from the first day of July, issue a warrant to one or more police officers or constables, directing them to proceed forthwith either to kill or cause to be killed all dogs going at large within their respective cities or towns, and not licensed and collared according to the provisions of this act, and any person may, and every police officer and constable shall, kill or cause to be killed all such dogs whenever and wherever found. Such officers shall receive one dollar for each dog so destroyed, from the treasurers of their respective counties, except that in the county of Suffolk they shall receive it from the treasurers of their respective towns. All bills for such services shall be approved by the mayor or chairman of the selectmen of the cities and towns in which said dogs are destroyed, and shall be paid from the moneys received under the provisions of this act."

After issuing such warrant, mayors and selectmen are required to certify the fact, under oath, to their respective district attorneys, whose duty it is made to prosecute all officers who fail to comply with the requirement.

Persons suffering loss or damage of sheep, or other domestic animals, by dogs, may inform the mayor or chairman of selectmen, who are required to appoint two disinterested persons, who, with himself shall proceed to the premises and determine and appraise the damage. Their award is to be certified by them to the county commissioners, who in December, annually, are to examine all such bills, and issue an order on the county treasurer to pay all that they approve. In case the gross amount received for licences is not sufficient to pay all the orders, the treasurer shall divide what he has *pro rata*, among such orders, in full discharge thereof. The appraisers of damages receive from their town treasurer one dollar each, for every appraisal. Any town, city, or county officer refusing or neglecting to perform the duties imposed by the law, is punishable by a fine not exceeding one hundred dollars.

SECT. 10. The treasurer of any county may, in an action of tort against the owner or keeper of any dog concerned in doing damage to sheep in said county, which damage has been ordered to be paid by the county commissioners, recover the full amount thereof to the use of said county."

The law is a very great improvement upon the old one, and we hope it may result in diminishing the number of curs, and increasing the number of sheep in the State, one hundred fold at least. Such a consummation is devoutly to be wished. It would add millions to our valuation in a few years. Let every dog be licensed or killed; and let no owner of a dog "whine" because of a just decree.—*Mass. Ploughman.*

Cold Water Laundry Soap.

The above is the title of a quack specific for washing, and which smacks strongly of h-u-m-b-u-g. We have never known one of these quack receipts of any value, and should the thousandth one in this line falsify our expectations, we shall soon begin to look for the dawning of the millennium—of washing day.

Read the following and then hold on to your five dollars until you know that it is actually all that it is represented to be. Remember, these extracts are from the semi or special advertising departments of the city papers. It will be seen that the extract from the *Prairie Farmer* is very guarded, just enough to save the advertising fee, and just as little to overlook the bad effects to the fabrics by the use of soda and other injurious material. As we put in this advertisement for the benefit of our readers, no charge is made to the soap man.—Ed.

"SAVE YOUR FUEL—INTERESTING TO HOUSEKEEPERS—COLD WATER LAUNDRY SOAP—PATENT APPLIED FOR.—Any person can, over an ordinary fire, make in twenty minutes, sufficient soap to last any family for three months, taking any common soap as a base. It is not injurious to the finest fabric. Read the following opinions of the press.

[From the Chicago Evening Journal.]

Housekeepers will be interested in learning that the principal objection to the recurrence of washing day that has hitherto prevailed is done away with by, to them, one of the greatest discoveries of modern times. Dr. H. Huntington has discovered a compound in the form of soap, which obviates the necessity for fire, hot water or boiling the clothes. This soap has been tested by the family of a gentleman in connection with this office, and found to be perfect in its work. Our readers in city and country will be visited by Dr. Huntington or his agents, who will offer the receipts for sale.

[From the Chicago Daily Tribune.]

H. Huntington, of this city, has invented a soap which is destined to work a revolution in the old-fashioned methods of washing as now applied in the domestic economy. By the use of this soap the housekeeper saves the fuel, labor and expense. No fire is used at all, thus saving coal and wood, which is no small item in these days of high prices. The labor is reduced at least one-half; the clothes are not injured, while in the long run it is an immense saving in expense. Mr. Huntington has certificates—some of which are published in our advertising columns—the character of which will convince any one of the merits of the article in question. Mr. H. is now supplying recipes, and we understand that arrangements are about being made for the manufacture of this soap. He may be addressed at present at the Revere House in this city.

[From the Prairie Farmer.]

We have tried the new soap in our family for two weeks past, and can second all that has been

said of it. It is an advantage both in the saving of fuel and labor, enabling a washing to be done much quicker and equally as well as by the old way.

The following Certificates speak for themselves:

CHICAGO, June 20, 1864.

DR. H. HUNTINGTON—SIR:—Having given the 'Cold Water Laundry Soap' a thorough practical test, I have no hesitation in saying that it will wash as well, if not better, than by the old method, without the least injury to the clothes, saving all the fuel and one-half the labor. I would confidently recommend its use to all families doing their own washing. If properly used, it is cheaper at double the price of ordinary soap, and cheaper than soft soap at one dollar a barrel.

W. J. ELLENWOOD,

Proprietor of Chicago Laundry.

J. K. BOTTSFORD,

Of the firm of Bottsford, Kimball & Co., 109, Lake street.

CHICAGO, June 21, '64.

The washing qualities of the 'Cold Water Laundry soap' have been tested at my house, and I cheerfully admit that the results were fully equal to those of the old system, thus saving fuel and labor, and being enabled to do the washing in a cool comfortable way.

THOS. WILSON.

Cashier Chicago Evening Journal.

H. HUNTINGTON, M. D.—SIR:—I have used your 'Cold Water Family Soap' in my kitchen with the most satisfactory results. It is a vast improvement upon the soap in ordinary and general use. Not an ounce of fuel was used in doing a week's washing on the occasion referred to, and the work was accomplished with less than one-half the labor. I can confidently recommend this compound.

Yours very truly,

A. H. BODMAN,

Ass't Ed. City Department Chi. Trib.

The undersigned will sell Rights for Counties and Towns. Agents wanted in every Town in the West, to sell Rights for family use. Address

H. HUNTINGTON.

P. O. Box 2107, Chicago.

WHY HOGS EAT ASHES.—Mr. Mechi, of Tip-Tree Hall, England, has discovered that pigs, when shut up to fatten, are fond of cinders, and improve in condition by eating a certain portion of them every day. Some persons are unable to account for this singular propensity in swine. Poultry are very fond of egg shells, lime, sand, &c., and it is well known the substances are necessary in order to form the shells of eggs, and to furnish material for the bones of fowls. Now it is reasonable to suppose that swine eat ashes and cinders for the purpose of supplying material for their bones, and this singular instinct in animals so low in the scale of intelligence, is truly wonderful, for ashes contain the ingredients which are necessary to form bones, viz: clay, silica gelatinized and made soluble by the fire. When hogs are at large, they take in clay and silica with their food, and eat bones and roots which contain the necessary ingredients; but when they are pent up they endeavor to supply the material necessary for keeping up their frames by devouring ashes and cinders. Let them have plenty of them.—*Stock Journal*.

DETERIORATION OF ORCHARDS.—Nathan. P. Atkinson, Elm Grove, Ohio Co., West Virginia, writes as follows upon this subject. We particularly commend his advice at the close of the letter to those who have old orchards:

"I came and settled in Ohio county; at that time there were something over twenty full grown orchards within six miles of my residence. At this time, 1864, there is not even a stump left to show that the ground was ever occupied as an orchard. In more than one-half of the orchards alluded to, the scattering trees that are left, I think, will not amount to fifty. In 1823, I planted between three and four hundred apple trees; at this time, which is forty-one years, there are at least one-third of the trees dead, and many still living are encumbered with dead and dying limbs, and every indication of health and thrift has departed from them, and the fruit they bear has become of a worthless character. My orchard has been kept well trimmed, and most of the time it has been plowed, and the ground under the trees has been dug up with a mattock. The old orchards I spoke of were mostly planted on the bottom lands of the Ohio river or Wheeling creek, and were under the operation of the plow more than one-half of the time, hence never suffered for the want of tillage. The conclusion I have come to is, that apple trees have nothing in their character that resembles the cedar of Lebanon or our common oak trees. My experience leads to this conclusion, that where an orchard has attained thirty years, the owner should plant a young one, and when five years more have elapsed, cut down the old one, for the imperfect fruit obtained from an old orchard is not equal to the use of the ground the trees occupy."

LARGE SALE OF ILLINOIS WOOL.—The Rockford *Register* of the 9th ultimo says: We learn that Mr. Shepherd Leach, of Rockford, has just sold his wool clip for this season, realizing for it, at 70c. a pound, \$9,540 46. Mr. Leach is the largest wool grower in the country, and has also one of the most extensive farms—cultivating near a thousand acres. During the past year he kept an average of about 2,400 sheep, but has at the present time about 3000. These are mostly grade Spanish Merinos, which he considers the best in this section.

BEES IN LOUISIANA.—A friend in New York sends us the following letter from a correspondent in New Orleans. We presume that his bees are out of the city. He says:

I send you by the Adams Express Company a small box of new honey. It may be a novelty to you to get new honey so soon in the season. I have opened one box, and it has the taste of the plum blossom, I presume this box is of the same sort.

I must give you a short history of my box operations; and if any one in the North can beat it, I will give up. About two years since, a friend presented me with an old flat box, containing a fine swarm. Last year I hived five swarms from it; but one was in a bad hive and the bees were lost. This year I hived eleven swarms from the five hives, and one swarm I found in the woods, giving me now seventeen fine hives. My hives have three boxes in the lower part, each containing 30 lbs., and three upper boxes, each holding

10 lbs., the hive will contain when well filled 120 lbs. Now in less than two months a single swarm in this hive has filled two lower and two upper boxes, in all eighty pounds. I call this a good yield for these models of industry, and do not think any apiary in the North has ever beat it.

As regards swarms we have never known an apiary at the North to exceed the account as above given.—*Rural American*.

PRATT'S DITCHER.—Have you heard of, or do you know anything concerning this ditcher, about which considerable was said some years since?—*Mason, Columbia Co., N. Y.*

We do not. It was found by those who used it to be a material aid in ditching; but we suspect the demand is not sufficient to warrant continued manufacture. Its price was an obstacle to its success, though cheap enough compared with the cost of manufacture, perhaps.—*Rural N. Yorker*.

The above are part of the reasons for the disuse of Pratt's Ditcher. An additional and prominent one is that it is a heavy and complex machine, and requires considerable force. As nearly all land is more or less stony, and the weight of the machine gives it much momentum, striking a great stone racks it badly; and some of its parts cannot fail to be more or less injured. One part being thus deranged, disorders the working of the whole machine; the consequence is that while the ditcher works admirably for a short time, while new and uninjured, it gradually becomes unfit for service and is cast aside for the pick and the shovel.—*Country Gentleman*.

Having seen this machine in operation, we concluded it could be useful only in land free from stone, stumps and roots. We were favorably impressed with the machine for soil adapted for its use. But the small demand at present for such a machine would hardly warrant any one's engaging in its manufacture to any considerable extent, as draining is not very generally introduced.—*Boston Cultivator*.

This machine had a pretty thorough trial on our farm, some three or four years since, and pleased us very much. So soon as we can obtain tile near by, we shall endeavor to get one of these ditchers. It appears sufficiently strong for the prairie, and we know that it works most admirably. It is one of the implements that we must yet have on our prairie farms. The time is not distant when tile draining will be resumed and then the ditcher will be wanted.—*Ed.*

SWEET POTATOES IN WINTER.—The operation of J. W. Tenbrook & Co., at Cobden, are making steady progress. The immense building which is to store the sweet potatoes, is in a good state of forwardness, and the crop to fill it promising.—Farmers in this county winter the sweet potatoe, and we hope to keep a full supply for family use ourselves the coming winter.

Horticulture.

Alton Horticultural Society.

FRIDAY, July 1, 1864.

The Society met at the residence of Washington T. Miller, in Alton, at 10 o'clock a. m., President Hull in the Chair. Among the members present were Dr. E. S. Hull, Geo. C. Eisenmayer, J. M. Day, C. W. Dimmock, J. McPike, H. G. McPike, Ellis Hibbard, S. R. Dolbee, H. N. Kendall, F. Starr, J. Burton, E. A. Riehl, J. M. Pearson, W. T. Miller, James Newman, S. B. Johnson and a number of ladies.

The minutes of the last meeting were read and approved.

Dr. Hull reported that having examined the microscope obtained for the use of the Society, he thought for general purposes it was perhaps the best.

Mr. Pearson tendered to the Society the use of a microscope of easier adjustment. His offer was accepted with thanks.

The Committee on places of meeting reported that the next meeting would be held at Mr. Huggins, near Woodburn.

The Committee on Entomology reported on exhibition.

1. A cedar fly, from Dr. E. S. Hull. It bores in unpainted wood and is thus very troublesome when numerous.

2. A squash-bug from Mr. E. A. Riehl.

3. A plant-louse from J. M. Day, very destructive to the water-melon.

Mr. Riehl said he had been unable to kill the squash-bug with air slacked lime or in any way except by hand. Dr. Hull found them exceedingly destructive last year to the Hubbard Squash, attacking the vines, the leaves, and finally the fruit. This year, however, he had found that by digging a hole about the size of a goose egg near the stem of the vine and covering it with a chip, the bugs were induced to seek lodging on the under side of the chip, whence they could be readily transferred in the morning to a vessel of hot water or soap-suds.

Mr. Day said the plant louse presented by him had appeared since 1857, on the water melon vines in the extensive fields devoted to that product in the American Bottom. They were most injurious in 1857 and 1858. They begin upon the vines when scarcely a foot long and disappear about the first of August. Are most destructive in dry seasons. Air-slacked lime and tobacco water did not seem to check them. An insect supposed to be the larva of the lace wing fly feeds upon them. Had received a letter from Dr. Walsh in regard to them which he would endeavor to produce at the next meeting.

Dr. Hull presented the head of an enormous stinging beetle that had overcome a crawfish in a single combat.

The Fruit Committee reported on exhibition.

From Mr. Flagg late Duke and English Morello Cherries, not quite ripe; Cherry, Red Dutch and Black Naples Currants, very fine; Houghton and

wild Gooseberries, large and fine; Raspberries, Red Missouri, firm, injured by drouth; Doolittle, large, firm, but also injured by drouth; Purple Cane, too soft for market; Keswick Codlin Apple, not yet ripe.

From C. W. Dimmock, Ohio everbearing raspberry, large, and of a fine flavor for a cup berry. Downing's everbearing mulberry, green, half ripe and ripe, of exquisite flavor and worthy of trial.

Mr. Pearson wished to know wherein the common mulberry was excelled by the Downing.

Dr. Hull could see no superiority.

Day thought the Downing decidedly better. Of better flavor and less stringy through the center of the fruit.

Mr. Dimmock was disappointed at first in the quality of the fruit, but finds it improve with use. Bears until frost.

Dr. Hull presented a model of grape stakes intended to combine the advantage of stake and trellis pruning. It consists of three stakes set in a line two feet apart and connected by a strip of lath at the top and at the surface of the ground. This permits the pruner to pass between the vines and finish a vine that he has commenced upon whilst it gives the advantage of lateral training.

Mr. Pearson brought up the matter of taking off the laterals of the grape vine. Had been in the habit of doing so, but from the talk at late meetings, was inclined to change his practice.

Mr. Miller said the larger the cane the better the fruit.

Dr. Hull said that President Shepherd, of the State Society, in former years allowed the laterals to grow on his Isabellas and Catawbias, and produced his premium fruit from such vines. His own conclusions therefrom was that strength rather than large size was desirable; that letting the laterals grow made a corresponding increase of roots and consequent strength in the vine the following year, whence resulted the finest fruit. But would use the laterals as a means of acquiring strength not to raise fruit upon.

Mr. Eisenmayer said he was intending to try training vines almost upon the ground. The grapes so grown are sweeter.

Elias Hibbard and John McPike were elected members.

On motion of Mr. Riehl, a Standing Committee to examine and report critically at the following meeting upon the condition and culture of the grounds of each member visited, &c., was appointed, consisting of Messrs. Riehl, F. Starr, D. E. Brown, Flagg and Burton.

The Society then took a recess, which was very agreeably spent in the dining room, under the hospitable direction of Mr. and Mrs. Miller, and in an examination of the vineyard, which is the largest, it is believed, in this locality, as well as the most fruitful. Five thousand Catawba vines are planted around the sides of a large sink hole, presenting in the season of full fruiting and foliage a most picturesque and pleasing sight.

The Society being again called to order, Mr. Newman read an Essay.

A special committee on Wines, consisting of Messrs. Pearson, Dimmock, Eisenmayer, Dolbee Hibbard and Kendall made the following reports:

The Committee on Wines beg leave to report the following samples on exhibition: Catawba, Concord and Virginia Seedling, from the vineyard of G. C. Eisenmeyer, Esq., of Mascotah, Illinois, of vintage of 1863. The first your committee considered equal if not superior to any Catawba vine yet presented:—"Virginia Seedling," not so well known, but promising to become still more of a favorite from its resemblance to the old varieties of Port and Maderia. "Concord" makes a light, pleasant wine of not much body. Samples of Catawba from frosted grapes, by W. T. Miller, Esq. This although earlier in the season promised to do something, is now worthless—"flat, stale and unprofitable."

Samples of blackberry wine by C. W. Dimmock, injured by too warm a cellar.

Currant wine made in 1863 by H. G. McPike, Esq., from three lbs. of sugar to one gallon of juice, quality very good. Wine improves by age.

Currant do. exhibited by W. C. Flagg, Esq.; made one gallon juice, 2 do. water, 7 lbs. sugar, very fine, 14 years old; very rarely found in this vicinity.

Samples of Catawba contributed by H. Kuenster of Monroe county, injured by transportation in warm weather. Quality could not be judged of by the committee.

Dr. Hull inquired as to the productiveness of the Norton's Virginia. Had understood it yielded but 200 gallons to the acre, whilst the Concord produces 600 and the Catawba 800 gallons.

Mr. Miller said a late Patent Office Report did not give such figures, but gave a larger yield to the Norton's Virginia than to the Concord.

The Investigating Committee being called upon, Mr. Riehl criticised Mr. Miller's former method of planting grape vines in holes. Would plant nothing in deep holes, would recommend entire pulverization of the soil and subsoil. In this connection he would recommend for the bluffs a side hill plow he had procured from Cincinnati. It had proved very satisfactory in its working. Cost here about \$20. In terracing the hills he believes the triangular scraper described in the Rural Register for 1864 would do excellent work.

Dr. Hull recommended root pruning as an effectual remedy for the blight which he saw was here doing some injury.

Adjourned to meet at Jonathan Huggins' on the Woodburn road, on Friday, August 5th, at 10 o'clock a. m.

Above we give another statement of the proceedings of the Alton Horticultural Society. For these favors we are indebted to that ever active friend of Horticulture W. C. Flagg, who sends us slips from the Alton *Telegraph* of that city.—Ed.

THE PURPLE CANE RASPBERRY has proved too soft to send a long distance to market with certainty. It will sour in twenty-four hours, if boxed up close, should the weather prove hot. When it can reach the consumer in that time it will give good satisfaction.

Editor's Table.

BAKER & PHILLIPS - - - PUBLISHERS.

M. L. DUNLAP, Editor.

SPRINGFIELD, ILLINOIS, AUGUST, 1864.

MICHIGAN BOARD OF AGRICULTURE.—Sanford Howard, late editor of the Boston *Cultivator*, has accepted the Secretaryship of this Board and has entered upon its active duties. We congratulate the farmers of Michigan in having the affairs of the college in such good hands. We have no doubt that they will make good practical progress.

COMSTOCK'S ROTARY SPADER.—We learn that no spaders will be made for the autumn work, but that it is expected that all demands will be met by the spring of 1865. Implements costing two hundred dollars each, cannot be made to supply the millions at once. The few that have been made have come from shops doing miscellaneous work; but it is found that it will require an immense establishment to do the work, and that the machinery must be adapted exactly to this end. This is an encouraging state of things in regard to the spader. We again repeat that all useful implements are slowly yet surely introduced to the notice of the public. While some humbug churn or rattletrap cultivator will travel through the land, creating a sensation to sell rights, the really useful make slow but sure headway; and while the one is forgotten the other gains a foothold from which it only retires to give place to still further improvements.

PICKLES.—H. A. Sheldon, Middlebury, Vt., says after trying numerous plans he has adopted the following as the best way to pickle cucumbers:—"Put them in very strong brine for forty-eight hours, and from that direct into cider vinegar, adding spice and pepper to suit. They are good in three weeks and keep two years sound and crisp."

All should remember that the cider vinegar made in cities at vinegar factories, is made of whisky, water and tartaric acid or cream of tartar; to make it more pungent sulphuric acid is used.—As this acid is the cheapest of the three, it is often used to excess. When it is present in the vinegar it will destroy the pickles in a short time; it is, therefore dangerous to use it. Farmers should use none but pure cider vinegar or that made from whisky and molasses. No cream of tartar or tartaric acid should be used.

IOWA STATE AGRICULTURAL COLLEGE.—Through the politeness of Gen. W. Duane Willson, Secretary of Iowa Board of Agriculture, we are in receipt of a photograph of the plan of this institution. Iowa is a progressive State; there is a go-ahead energy among her people that knows no failure.—She has not been cursed with a large emigration of the poor white trash, to bar her way in the field of progress. Hers is a bright record for common schools and liberty; and now she is to put the gift of the General Government, designed to give the farmer a splendid education for his calling, into practical use. Will our State allow young Iowa to get the start of her in this grand enterprise?

IOWA HOMESTEAD.—This valuable paper has changed hands, Mr. Miller retiring from the business department and giving his whole time to the editorial. The paper has been enlarged and improved and presents a highly prosperous condition. We are pleased to see this state of things in our neighbor over the river, as it shows that the plains of Iowa are in the hands of a reading and consequently intelligent class of farmers.

The *Homestead* aims at teaching western farming in its practical bearings, and, thus far, has been eminently successful.

PUMPS.—We ordered a couple of pumps of J. F. Powell, Chicago, some two months since, and was pleased with both pumps and price. The cost was as follows.

One pump, ten feet.....	\$6 00
Eight feet pipe.....	1 20
Freight	60
	<hr/>
	\$7 80

This morning a pump peddler called to sell us one of same size and similar make. His prices were:

One pump, ten feet.....	\$ 8 00
Eight feet pipe.....	4 00
	<hr/>
	\$12 00

Difference.....\$ 4 20

All peddlers will excuse poor men like us from dealing with them—we can't afford the luxury. All well to do farmers can always buy of peddlers, as they have the money to spare; but those who wish to plant orchards and make their homes pleasant must purchase at first hands or regular dealers. They have no time or money to throw away on any class of peddlers, homemade tree peddlers included. But we forgot to tell the cost of the other pumps. One ten foot cistern pump, \$5.

CANARY SEED, of which we have twenty-five acres, is light. Next month we intend to give a full account of our experiment with this new crop. It is very probable that another year will close the importation of canary seed to this country.

TURNIPS.—Seedsmen report an unusual demand for turnip seed. Although the crop is not a certain one, yet we cannot afford to pass by the time of sowing without an effort to grow a few hundred bushels of this desirable root.

SUGAR BEET.—We hear nothing of sugar beets this season. We trust the idea of making sugar from them is not abandoned.

On the whole the crops are fully up to the average, and are being got in in good order and in reasonable season. The improved implements have done much to make amends for the scarcity of labor. Not an acre of old land was idle; in this respect there is a marked gain over last year. Besides this, a large amount of prairie has been broken up, which will add to the area for next year's planting. With Burson's binder, the labor of binding is reduced to a single hand, to from eight to ten acres a day. It is true than when we take the cost of wire into account the saving is not so much, but then the harvesting is done and we do not have to board and lodge the wire, nor will it strike for \$3 a day and then take the work *aisey*.

BI-MONTHLY REPORT—DEPARTMENT OF AGRICULTURE.—If the Commission would issue ten to fifteen pages monthly it appears to us that the report would be more useful. This report is an improvement, being cut down to 38 pages, and contains an immense amount of facts without being loaded down with absurd theories. Our readers who wish a copy should address Commissioner Newton, who will take pleasure in supplying them.

SHELTER.—Every year's experience adds to the testimony in favor of shelter, whether to stock or crops. In the garden we use hot beds to forward early vegetables, but the present price of glass is making this rather an expensive luxury.

To overcome this difficulty Dr. Jas. Weed, of Muscatine, Iowa, has been in the practice of using what he calls a tree and plant protection, which is simply a shelter from the winds and severe cold. For plants these shelters can be made cheaply, and so simple that a child can handle them.

If lumber does not get more dear than glass we shall give the plan a trial next spring. For the covering of green houses they must be valuable in the saving of heat and to ward off hail storms.

Our maple and willow belts are having a good effect on our orchard, and no money would tempt us to dispense with them.

We have now entered on the last half of summer and to-day, July 21st, can write with some degree of exactitude. The harvest commenced late as the season is, at least a week behind the usual time. Winter wheat, though not largely sown and thin on the ground, had long heads with the plumpest possible berry; bringing the crop up to a good average. Spring wheat comes out very fine, the chinch bug not injuring it in this part of the State: in fact, this crop is never injured by them when sown early, and on good, well cultivated lands. This crop is becoming more and more popular in Central Illinois. It is but a few years since it was supposed to be unsuited to this climate, but fall plowing and early sowing have worked a change in the opinion of farmers.

Oats are very fine and a large breadth sown—Ten years ago oats were but little sown, and then they most generally lodged, growing too rank; but the change in the climate made by cultivation and pasturage, giving a dryer air, has made this a popular crop, and hereafter more oats and less corn will be fed to farm teams. This mixed husbandry will lead to the building of farm barns, and we shall soon see a change in this respect. For the corn crop, a crib of poles will answer, but the oat crop is better secured in a barn or the hay mow.

Barley is good though little sown. Barley will never become popular among barnless farmers.

FLAX.—A large breadth of this crop has been sown. The staple is short but the yield of seed is good. This is becoming a popular crop, and so long as the straw will bring six to eight dollars a ton, and the seed two to three dollars a bushel, cannot fail of being profitable. The stubble is first rate for winter or spring wheat and should be plowed at once after the crop is taken off.

POTATOES.—The crop of early potatoes is light and it is yet too early to determine the late planting.

CORN—Spring wheat, oats and flax have largely trenched on the space of this crop, and less than usual has been planted. Some fields are rather late, but on the whole the crop looks very fine.

Our planting on fall plowed land is very fine indeed, showing a marked difference between that plowed in the spring and autumn, planted the same day and cultivated alike. We cannot too strongly commend the practice of turning under the stubble immediately after harvest, where corn is to be the next crop; in fact, for any crop, as it has the effect of a summer fallow.

We have seldom seen a better show of corn at this season. The stand is rather thin from the devastations of vermin, but the growth is rank and

we shall look for large ears. The chinch bug is abundant, but with such a vigorous growth, can do little damage.

SORGO.—A large breadth was planted and we have yet to hear of a poor field. Should the season continue as favorable, the yield must be very large. This is particularly gratifying at this time of dear sugar and molasses.

The *Sorgo Journal*, which took some exceptions to our remarks on one-horse pans and horse-power rollers, is now out in favor of steam. It says that the difference is that between the value of a bushel of coal and a bushel of oats. Water power it says, is the cheapest, and coal next. As coal will cost about 29 cents a bushel at most of our stations, the advantage is a large one. We shall yet live to see our theory of large sorgo mills the rule, and the farm mills the exception. We shall not be surprised to see Clark's sorgo works engaged on large mills next season, to the exclusion of the small mills. The article on "Steam vs. Horse Power" is a move in the right direction.

RYE.—We omitted mention of this crop in its proper place. The crop is good and more than usual was sown. No spring rye is sown. Those short of autumn pasture should sow a few acres of this grain. For sheep it is invaluable, both for fall and winter pasturage.

BUCKWHEAT.—For the first time this is assuming the position of a crop, and should it prove a good one, this part of the State will have its own supply of slap-jacks.

APPLES will be an average crop, and as the trees are not overloaded we may look for those of good size.

PEARS are doing well and present a fair crop.

PLUMS appear an almost entire failure.

PEACHES, of course, are out of the question, but the trees are doing better than was anticipated; we shall look for a fair crop next season on all young trees. Those who would grow the peach must make annual planting of trees the rule; in that way they will have peaches in this part of the State five out of six years.

CURRANTS, GOOSEBERRIES, STRAWBERRIES and RASPBERRIES have produced abundantly; the first two have been unusually productive.

THE COMING STATE FAIR—SEPT. 12th to 17th.—The Premium List of our State Society, large, liberal and well arranged, has been before the people since early in the spring, and we hope our readers have consulted it with the determination to become competitors for some of the premiums offered; not for sake of merely the money value to be obtained if successful, but that they may be benefitted by

bringing their skill in grain growing, stock raising, horticulture, floriculture, dairying, or mechanic, or household arts in competition and close comparison with similar skill, on the part of other citizens throughout the State. Such rivalry improves, sharpens and benefits in every instance, and in neighborhoods, communities, states, nations and the world, has done more to stimulate enterprise, diffuse intelligence and promote the general progress and welfare of mankind in social economy, than almost any other one thing.

Our County and State Fairs furnish the times and places for the appropriate display of this landable emulation, and the best opportunities for learning the valuable lessons it is calculated to teach. To these things quite as much as to her natural advantages and resources Illinois to-day owes her *prominence* as one of the very front States in agricultural production. Her Annual Fairs have called attention at home and abroad to her capabilities as well as wants, and intelligent farmers have not been slow to avail themselves of the one and to supply the other.

If in ordinary times, when the nation was pursuing the even tenor of its way, there was resting upon any citizen any obligation requiring him to use every means for the improvement of himself, as well as his fellow citizens, how vastly that responsibility and obligation are increased and strengthened in view of the present and prospective condition of our beloved and bleeding country. If ever any resident of this earth could be plainly required to double his exertion, to seize every occasion to increase his knowledge and educate himself in the art of producing human food, that time is clearly *now*, and that resident the *farmer of Illinois*.

Relieved, almost entirely, from even the apprehension of being disturbed in the quiet prosecution of his labors, with a certain market and high prices, and above all, with the assurance that patriotism, love of country, love of free institutions and civil and religious liberty, all require it at his hands; the Agriculturist of the prairie must and will not be found careless and indifferent. Prepare then for the County and State Fairs. Let our fair country women upon whom rests heavily the trouble afflicting our nation, join their husbands, fathers and brothers, and manifest the interest in these things they cannot help but feel.

One feature of the coming exhibition at Decatur is worthy all the effort which can be made for its success. We mean

THE SANITARY FAIR.

The Board have kindly consented that the State Sanitary Commission shall erect a building on the

grounds in which will be deposited the **FREE GIFTS** of a **PATRIOTIC PEOPLE** in aid of the efforts made to supply the **SICK AND WOUNDED UNION SOLDIERS** of our brave armies in the field with comforts they need and which cannot otherwise be supplied. Articles designed to be donated to this cause may nevertheless go to their appropriate departments of the Fair, compete for premiums and be sold at public or private sale.

We understand that Gov. Yates is about to issue a circular to all having trophies of this war, requesting them to forward them for exhibition in **TROPHY HALL**. This idea, if properly carried out, as it certainly will be, will furnish a collection of more interest and value than any other which could possibly be presented to the people; and which will of itself, amply repay the time and expense of a visit to the Fair. The war-worn and blood-stained battle-flags that waved in the bloody strife at the sacrifice of many a brave boy, and often being reduced to shreds and patches, forwarded to the State Capitol as monuments of patriotism and valor, will be there, and, there too, will be any number of the flaunting banners of the would-be slave confederacy, captured by the Union arms in many a historic struggle.

An Executive committee for the State Commission will at an early day give the programme to the public and, in the mean time, we can only say to our readers, be prepared to add your welcome contribution to the sacred fund.

Correspondence.

For the Illinois Farmer.

Crops in Egypt—Castor Oil Beans.

CLEAR CREEK LANDING, UNION CO. ILL.,
July 19th, 1864. }

M. L. Dunlap, Esq. Dear Sir:

Our crops are excellent; I never saw corn better in my life. Most of the fields are all silked out. There is a great deal planted in this vicinity. I have just finished cutting my oats; they are like most small grains in this neighborhood—about three-fourths of a crop.

Mr. McClure has fifty acres of Castor beans, which promise a splendid crop. Wheat not very good, although very little sown. People are threshing. There is some cotton planted and looks very fine. Farmers are only raising enough for their own use. Sorghum looks finely, and, as the saying is in Egypt, "There is right smart planted."

Tobacco is ahead of last year; it is considered an extra crop this year. Yours, truly,

S. B. STEWART.

—Egypt will yet come out of the woods. The infusion of Northern blood is already being felt. There are numerous bright spots gleaming out here and there. The natives, with their plantation ignorance, are giving way, running away, or becoming assimilated to the go ahead of the new settlers from the North. But a few years since and a leading Egyptian editor, now a leading traitor, said there was "no *curculi* or other blight," on the peach crop of Egypt; that the worm (*curculio*) was occasioned by late frost. No wonder that such intelligent (!!) gentlemen turn traitors to their country. Ignorance, swagger and meanness go hand in hand. It is theirs to pull down, not to build up.

The products of Egypt are becoming varied and of importance to the North. Next winter our Northern cities are to have daily supplies of sweet potatoes from her cellars. But no thanks to her native energy for this and like favors. She has neglected the common school, and thus lost the key to her development; the North will find it and unlock the rich treasures of her soil.

We had lost all traces of the whereabouts of the Castor Bean, and are glad to hear from it again. The counties of St. Clair, Madison and Macoupin did, for a long series of years, supply the world with *Castor ole*. This oil is largely used for the various hair oils and for machinery, and is now less used to aid the running gears of the genus *homo* than formerly.

When the rebellion flung its dark pall over the south part of our State, and the K. G. C.'s sought its downfall, a hundred rifles gleamed along the fields of Clear Creek Landing, and came at the bugle call of the now lamented Col. Stewart. These rifles have been kept bright and their bayonets sharp for the domestic foe who, cowed, dare not burn a house or steal a horse from any of the loyal hundred, for just on the edge of the settlement dangled the skeletons of the cow boys and traitors who could gain no further entrance, and stand a sentinel, pointing their bony fingers as a warning. This band of farmers have kept treason at bay—have been little harmed, for no guerrilla dare show himself within the settlement; while Union or rather Northern men in other parts of the county have had their orchards cut down, horses stolen, houses burned and some of them murdered, these men of the hundred rifles have not been molested, consequently peace and prosperity have been their good fortune.—Ed.

For the Illinois Farmer.

The Crops—Apples and Peaches—High vs. Low Heads—Cutting back the Peach.

PAYSON, Adams Co., Ill., July 21, '64.

M. L. Dunlap—Dear Sir :

Thus far the season has been very dry at this point. We have had no rain since the 3d inst., and crops are beginning to suffer. Last year while the rest of the State was suffering with drouth, we had abundant rains and fine crops, but now the tables are turned and we in turn are like to have short crops. The corn and potatoes came up badly; in fact some of it is just appearing above ground, often one plant in a hill; the consequence will be a very uneven growth, as well as stand.—Although late the color of the corn is good and with timely rains may yet produce a tolerable crop. The section thus suffering is not large, as the adjoining country has been more fortunate.

The apple crop will be short, caused by the hard winter and the late spring frosts.

No peaches, and trees are somewhat damaged by the winter. When you were here, some three years since, you remarked that my trees would not produce another heavy crop, but such did not prove to be the case, as we have had two heavy crops since; but this I attribute to severe heading back. When the peach is badly injured this severe heading back will save them. I shall expect several good crops from the orchard that you supposed near its end. I commenced shortening in May, but that was rather late and have lost about a dozen trees. Should have commenced the work earlier.

You also took exception to the height of the heads of my apple orchard, but I am yet satisfied that an apple tree should head say four to four and a half feet from the ground, and peaches three to three and a half. At this height they are less liable to split down, and even then will rest the ends of the branches on the ground. With lower heads you cannot get under them with a horse to work the ground. Nor do I think high headed peach trees kill as badly as the low ones. I have had forty years experience in orcharding, and have no reason to change my mode of practice.

Yours truly,

CLARK CHATTON.

—Mr. Chatton is certainly a very successful orchardist, but his orchard is located in a most favorable spot. The orchard is carved out of the heavy forest on the east bank of the river, on a soil of loes overlying the mountain limestone. He has excellent drainage, rich soil and shelter made by the forest walls that surround his farm clearing on

three or four hundred acres. Here high heads are less objectionable than on the prairie. With him the Baldwin, Rhode I. Greening, and other tender sorts thrive well.

The peach orchard is half clover; that is, a strip of clover is sown along the rows of trees and is cut and used for a mulch; while the middle strip is kept well cultivated. This is a practice highly to be commended and just adapted to our low head theory. The cutting back of the peach should not be overlooked when it will produce the valuable results stated by Mr. Chatton.

We shall be pleased to hear from Mr. C. in regard to varieties of the apple and peach.—Ed.

For the Illinois Farmer.

Yield of Wool.

CATLIN, Vermillion Co., Ill., June 8, '64

Editor Illinois Farmer—Dear Sir :

Enclosed you will find a sample of wool from my Leicester lambs. I sheared seven head and got seventy-two pounds of such wool as I send you.

Yours truly,

C. L. PATE.

The sample sent is very long and shows under the microscope good fitting properties. We find the long wool sheep growing in favor with our flock masters. Vermillion county will show some of the best sheep at the next State Fair. Morgan, DuPage and Sangamon will have to look well to their laurels in this department.—Ed.

Illinois State Horticultural Society.

CIRCULAR No. 1, 1864.

OFFICE CORRESPONDING SECRETARY, }
Alton, July 1, 1864. }

DEAR SIR:—For the purpose of ascertaining the amount of injury done by the cold weather of the past winter, the following queries are proposed to the Horticulturists of Illinois, and answers solicited from every section of the State :

1. Minimum temperature January 1 and 2 ?
2. Height of barometer ?
3. Humidity of atmosphere ?
4. Direction and force of wind ?
5. Amount of snow ?
6. Other meteorological conditions ?
7. Nature of soil where trees, &c., were planted ?
8. Cultivation ?
9. Elevation ?
10. Exposure ?
11. Amount of crop in 1863 ?
12. Growth in 1863 ?
13. Pruning in 1863 ?
14. Apples, hardy varieties? half hardy? tender?
15. Pears, " " "
16. Peaches, " " "
17. Plums, " " "
18. Cherries, " " "

- | | | | | |
|-----|-----------------|---|---|---|
| 19. | Apricots, | " | " | " |
| 20. | Grapes, | " | " | " |
| 21. | Currants, | " | " | " |
| 22. | Gooseberries, | " | " | " |
| 23. | Blackberries, | " | " | " |
| 24. | Raspberries, | " | " | " |
| 25. | Evergreens. | " | " | " |
| 26. | Decid. Orna'l, | " | " | " |
| 27. | Orna'l Shrubs, | " | " | " |
| 28. | Vines, Creep's, | " | " | " |
| 29. | Roses, | " | " | " |
| 30. | Forest Trees, | " | " | " |

Respectfully yours,
W. C. FLAGG.

To the above we answer: No. 1, see weather table in February No.; No. 9, 650 feet above the sea; No. 11, good; 12, unusually small; 13, very trifling; 14, 15, all in our grounds; the tender varieties have been wed out; 16, badly injured; 17, fruit killed; 18, May Cherry one-fourth crop, all others killed; 19, killed free and fruit; 20, all injured where exposed, and all sound where sheltered; 21, 22, crops unusually abundant; 23, killed; 24, very fine; 25, Red and White Cedar, White, Austrian, Norway and Scotch Pines and Balsam, uninjured; 17, 18 and 19, most varieties more or less damaged.

We have often stated that all the so-called tender varieties of the apple can be grown when sheltered, just as well as in New York or New England. Spice Sweet, one of the most tender when exposed, was uninjured and bearing. One of our neighbors has the Baldwin in full bearing, the trees of which came from New York in the fall of 1857. Shelter, not shade, is what we want.—Ed.

CIRCULAR No. 2, 1864.

OFFICE CORRESPONDING SECRETARY, }
Alton, Madison Co. Ill., July 1, 1864. }

DEAR SIR:—Desiring to collect facts concerning the rise, progress and present condition of Horticulture in Illinois, I submit to your consideration the following queries, to which I would ask an early response:

1. In what year were the first fruit trees or orchards planted in your county? What were the kinds and varieties? Whence brought, and by whom? Their longevity?
2. In what year was the first nursery established, and by whom? The methods of propagation? The kinds and varieties of fruit trees, &c., disseminated?
3. In what year were ornamental trees, shrubs and plants introduced? Kinds introduced? Age and size of finest specimens evergreens, &c.?
4. What is the progress and present condition of Horticulture: the amount of apple, pear, peach, cherry, plum, apricot, nectarine, quince, grape, currant, gooseberry, blackberry and strawberry plants now planted in your county; the product and general success? The amount of ornamental and useful trees, hedges, screens, &c., planted?—
5. The names and postoffice address of your most successful Horticulturists?

Respectfully yours,
W. C. FLAGG.

The first orchard set in this county (Champaign) so far as we can learn was set out by Henry Sadorus, about one mile south of Sadorus Station, on the G. W. R. R., in the spring of 1830. They were sprouts of an old orchard of the Milam, brought from a point some fifty miles south of Terre Haute. The winter of '55 seriously injured them and the orchard is now in its last days; for thirty years did not fail of a crop. Dunlap's Nursery was established in 1857. Root grafting of the apple, grafting of cherry and plum, budding the peach. The planting of apple trees is rapidly on the increase, and the county must at no distant day stand among the first, for apple, pear, May cherry and the small fruits.—Ed.

OHIO POMOLOGICAL SOCIETY.—We have the report of the winter meeting of this Society, and find it unusually interesting. The revision of the fruit list is to the point, and must prove valuable to the State at large. Here is what they say of some of our favorites:

JONATHAN—This apple was spoken of as doing remarkably well in central and southern Ohio.—Fruit very fair and good, not large, but just right for the dessert; tree rather a slender grower, but very productive.

Give the fruit good culture and it is of fair, if not large size. It has a genuine Spitzenburgh flavor. We have ten trees, set out in the spring of '58, bearing the 2d good crop.

"Benoni, much approved where known; especially South."

"Dominie, not generally known; good and profitable for market."

"Early Pennock, or *August*; good for market and cooking."

"Fallawater, (*Tulpehocken*), large and popular everywhere, though second rate."

Snow, generally approved where known; especially North."

"Gilpin, or *Romanite*; approved as a long keeper; small, second rate."

"Hightop Sweet, or *Summer Sweet*; small, but approved as earliest sweet."

"Keswick Codlin; esteemed for cooking and market,"

"Lowell, or *Orange*; productive and profitable; generally approved."

"Rambo, everybody wants it, and will have it."

"Ramsdell Sweet, or *English Sweet*; productive and profitable; good grower."

"Rawle's Janet, much approved South and South west; small North."

"White Pippin, popular wherever known; especially Central and South."

"White Winter Pippin; much esteemed in Southwest."

The clearing up of the large forests begins to tell

on varieties, and sufficient shelter must be resorted to to make up the waste of the old wood lands.—Here we began at the bottom round of the ladder and slowly climb, as belt after belt of wood is added to the prairie farm.

American Pomological Society.

CIRCULAR.

April 1, 1864.

Dear Sir :

The undersigned beg leave to remind you that the next meeting of the American Pomological Soc. will be held in the city of Rochester, N. Y., on the 13th, 14th and 15th days of September next, and to request you to forward as early in the season as may be in your power, any additions or alterations you may have to recommend in the Catalogue of Fruits for your region, with such information on the subject as may seem to you important.

Observations upon the effect of the severe cold of January last upon different varieties and under various circumstances will be particularly valuable.

If you do not possess a copy of the Society's Catalogue, you may procure one by addressing the Chairman of this Committee.

Hoping to hear from you at your earliest convenience, we are very respectfully yours,

P. BARRY, Rochester, N. Y.

J. S. CABOT, Salem, Mass.

J. A. WARDER, M. D. Cincinnati, Ohio.

CHAS. DOWNING, Newburg, N. Y.

C. M. HOVEY, Cambridge, Mass.

F. R. ELLIOT, Cleveland, Ohio,

JOHN J. THOMAS, Union Springs, N. Y.

M. L. DUNLAP, Champaign, Ill,

M. P. WILDER, Prest., (Ex-officio.)

Committee on Revision of Catalogue.

It is important that the list for this State be thoroughly revised, and to this end I would ask all fruit growers in the State to aid me in making up a more perfect list. It has been my intention to attend the next meeting at Rochester, but find that it will be out of the question; the last call for men in the army has settled the point beyond an appeal. But this need not interfere with the revision of the Catalogue and the sending of specimens, and I trust that others will be more fortunate in time at disposal and attend the meeting. This State has never been fully represented in the American Pomological Society, but I trust that such will not continue after the close of the war. All communication on the subject of revision should be addressed to the undersigned, who will forward to the Chairman of the committee.

M. L. DUNLAP.

HONEY BEES—This season has been a remarkable one, in regard to bees swarming in Central New York. In some cases not a swarm has issued,—We have about 40 hives of bees and have not had a single swarm; such a circumstance never before occurring in our apiary.

The reason why the bees have not swarmed in our apiary, is the fact that no drones have been reared in it this season. We never before in twenty-five years' experience, knew of such a circumstance with our bees. Why no drones were reared we cannot tell; but without drones swarms are useless, as the young queens cannot be impregnated; as the bees, knowing this fact, destroy all young queens—if any are produced—and in the absence of queens no swarms issue.—*Rural American.*

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Advertisements.

Large Sale of Blooded Stock.

Having associated with me in business my sons, (William and Charles S. Brown,) I will sell at public auction, at my residence, Grove Park, in Island Grove, Sangamon county Illinois, three miles west of Berlin, on the road leading from Springfield to Jacksonville, on Wednesday and Thursday, August 24th and 25th, 1864, (sale to commence at ten o'clock,)

Thirty or Forty Superior Short Horn Cattle, consisting of Cows, Heifers and Young Bulls; also South-Down Sheep and Berkshire Hogs, from the importation of the Illinois Importing Association of 1857; also a number of valuable

BROOD MARES COLTS AND FILLIES,
of trotting stock.

Catalogues of Stock will be issued in due time.—Persons desirous of obtaining them can do so by addressing me at Berlin, Illinois.

Aug-'64-1t

JAS. N. BROWN.

Swine! Swine!

Those wishing specimens of the breed of Swine for many years bred of the Illinois Hospital for the Insane, and now favorably known as the "Hospital Breed," can obtain choice animals at moderate prices. Apply to

E. P. JONES,
Farm Steward.

N. B.—Persons having these Swine, if they wish to effect sales, are requested to correspond as above stating time and place of purchase.

Jacksonville, Ill. June, 1864.

Aug. 1, '64

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Aug1-1864-1t

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Special Notices.

AGENTS.—We do not appoint any agents—all are voluntary. Any person so disposed, can act as agent in any place.

ENLARGE YOUR CLUB.—Will not the friends of the ILLINOIS FARMER inquire how many copies of the FARMER are taken in their respective offices, and pass around among those who ought to have their names added to the list? Our terms are so low to clubs of ten and twenty that we ought to have one or the other made up at every office in the State, and at every office in Central Illinois, one of twenty or more. Will our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?

TO SINGLE SUBSCRIBERS.—You receive the only copy of the FARMER that goes to your post office. Can you not send one, two, three or more new subscribers, without any trouble? Try. Sample numbers, etc., sent free.

DRAFTS.—Those remitting us large amounts of money, will please send us drafts on Springfield or Chicago, less they exchange. If you send cash in a letter, be sure that it is well sealed and well directed, to Baker & Phillips, Springfield, Illinois.

THE FARMER AS A PRESENT.—Any of our subscribers who wish to make a present of the ILLINOIS FARMER for 1863, can have it at the lowest club rates, when out of the State. For fifty cents you can treat your Eastern friends to a Western Agricultural Paper. In no way can you invest that amount to so good advantage to emigration.

SEND NOW.—Any person who remits pay for a club of ten or fifteen, or any other number at the specified rates for such clubs, can afterwards add to the clubs, and take advantage of the reduction. Thus a person sending us five subscribers and three dollars, can afterwards send us three dollars more and receive six copies.

TO THE CASUAL READER.—This and other numbers of the ILLINOIS FARMER will be sent to many persons who now use it for the first time. Will they not examine it, and if they like it, subscribe for it, and ask their neighbors to subscribe? Sample numbers, prospectuses, etc., sent free to all applicants. See terms elsewhere.


HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighborhood, can easily make up a club of five, ten or twenty, but no time should be lost in doing so, for your neighbors may send east for their


paper which, though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us Western farming.


HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage:


1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it.
2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them.
3. Get post masters interested. They see everybody, and are efficient workers.
4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers.
5. Begin now, before the agents of Eastern papers get up their clubs.

This last hint is especially important. Let us hear from you soon. See terms elsewhere.

 Clubs may be composed of persons in all parts of the United States. It will be the same to the publishers if they send papers to one or a hundred post offices. Additions made at any time at club rates. We mail by printed slips, which are so cheaply placed on the papers, that it matters little whether they go to one or a dozen offices.

 Correspondents will please be particular to give the name of the post office, county and State.

 Specimen numbers will be sent gratis, upon application.

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Springfield, Illinois.

SPECIAL NOTICE.—For terms see prospectus on last page. All exchanges and communications for the eye of the editor should be directed to ILLINOIS FARMER, Champaign, Illinois. Electrotypes and business matters, and subscriptions, to the publishers, Springfield, Illinois. Implements and models for examination should be sent to the editor. The editor will, so far as it can be done personally, test and examine all new machines and improvements submitted to his inspection. He will be found at home, on his farm, nearly all of the time. So far as it is possible, the conductors on the Illinois Central Railroad will let off passengers at his place, which is directly on the road, three and a half miles south of the Urban Station, now the city of Champaign.

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NORWAY SPRUCE, two years old,
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three to five inches, \$7.00

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best for market, two to three years old, at half the
usual rates.

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tested varieties, together with a good assortment of
Fruit and Ornamental Trees, &c., &c.

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ROBT. DOUGLAS.

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DESMOINES IOWA, Jan. 1, 1863.

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and stocky. The genuine "May Cherry," (Kentish
or Early Richmond of Downing.) Dwarf and Stand-
ard Pears, the Purple Cane Raspberry, the best of
all raspberries for the farm; Houghton
Gooseberry, Grapes, Strawberries, Ornamental
Trees and Plants. An immense stock of Silver Leaf
Maple, from \$5 to \$15 per 100, 6 to 10 feet high. The
green house is well stocked with roses and other bed-
ding out plants. This stock is grown to retail and
not adopted to the tree peddler, as all trees and plants
are large, stocky and thrifty, and intended for the
planter only. Terms cash with low prices.

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M. L. DUNLAP,

Champaign.

March 1, 1863.tf

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April-64-1y*

The Illinois Farmer,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE.

PUBLISHED AT

SPRINGFIELD, - - ILLINOIS,

BY

BAKER & PHILLIPS,

AND IS EDITED BY

M. L. DUNLAP, Tribune's Rural.

TERMS IN ADVANCE.—\$1 a year; two copies 1 50; five copies \$3; ten copies \$6, and one to getter up of the club twenty copies \$10.

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The postage on the FARMER is only three cents a year in the State of Illinois, and six cents out of it.

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Exchanges and communications for the eye of the Editor should be addressed, ILLINOIS FARMER, Champaign, Illinois.
All business letters are to be directed to the publishers, Springfield.

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One page, or two columns.....	\$12	\$30	\$52 50	\$75
Half a page or one "	7 50	18	30	45
One fourth page or half column..	4 50	10 50	18	27
One eighth or one fourth " ..	3	6	10 50	15
One square of ten lines.....	1 50	3	6	10 50
Card of five lines one year.....				\$8 00
Fifteen cents a line for less than a square each insertion.				

All worthy objects advertised, and those of importance to the Farmer will receive, from time to time, such editorial notices as the Editor may consider them worthy of, without additional charge.

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Springfield, Ills.

THE ILLINOIS STATE JOURNAL

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THE ILLINOIS FARMER.

VOL. IX.

SPRINGFIELD, ILL., SEPTEMBER, 1864.

NO. 9.

The Illinois Farmer,

DEVOTED TO THE

FARM, THE ORCHARD AND THE GARDEN,


PUBLISHED BY

BAKER & PHILLIPS,

SPRINGFIELD, - - - - - ILLINOIS.

M. L. DUNLAP, Editor.

All business letters should be addressed to the publishers.

 EXCHANGES and all matters pertaining to the editorial department, must be directed to ILLINOIS FARMER, Champaign, Ill., as the editor resides at that point, and is seldom at the office of publication, from which he is distant over eighty miles.*

* * For terms see prospectus and special notices in advertising department.

September.

In many respects September may be counted among the most pleasant months of the year. It is the cornucopia of the fruit months, in which Pomona is more magnificently crowned than in any other month of the year.

The harvest of the cereals is over, with the exception of buckwheat, among which the bees are singing their happy songs and gathering in the luscious sweets. The music of the threshers comes over the fields where the corn is being shocked, not the sound of autumn flails that were wont to beat out the grain by single blows, but the

steady buzz that sings its merry song, as the feeder supplies the golden sheaves, that follow each other in quick succession, bagging the wheat and placing the straw in stack—a wonderful worker that never tires, saving our muscles from the steady toil of

“The weary flinging tree.”

This is the month of Fairs; the month that divides the heated term of summer from the sharp frosts of autumn. We begin to shock the corn the last of this month and to harvest the potatoes. The apple crop is receiving its rich pencilling, ready for the picking season. The State Fair is held this month and is an institution that all should attend. We can all learn something that will be of value to us. You will find hotel accommodations rather crowded and of the cheap order. To avoid this try the soldier's fare and lie down in your blanket at night, and enjoy yourself hugely. We intend to try it again at the coming Fair.—This will make us independent of crowded hotels, and as meals can be had at all hours, we will be as independent as a wood-sawyer's clerk. We attend fairs to take lessons, not to have a nice time at a hotel; hence the accommodations are of but little moment. It is a very poor place for wedding parties and the like, though these sometimes make the experiment.

Of all the farming months September gives us the most leisure—a sort of half-way house, a beginning and ending of many of the farm processes. We have threshing, sowing of winter wheat and rye. We also begin the working of the sorgo crop, cutting up the corn, and looking after the potatoes.

In the orchard, the windfalls should be worked into cider vinegar, and the ripe fruit sent to market. Of course none of the winter apples are ready for the pickers. All excess of cooking apples that are not marketed should now be dried.

But above all, the fall plowing should not be neglected, for upon this will depend to a great extent the success of the next year's crop.

In the garden we have little to do but to luxuriate upon melons and other vegetables, provided always that we have done our duty in the early part of the season. Should you find the cabbage cracking open from excess of growth, loosen the roots a little, and the injury will abate. Of course you will not allow the garden to be filled with pig weed, barn grass, Spanish needles or stramonium—not a bit of such trash, though your neighbor Jenkins over yonder, who does not take the *FARMER* will do all this, and more. Look thro' your orchard and other trees for worm nests, and destroy them.

The hay and grain stacks should be looked after and thatched with prairie hay or corn stalks. There are plenty of odds and ends to be looked after, to keep one busy, though the hard work of haying and harvest is past. Next month we will have plenty to do—real hard work—but during the mild days of September we may enjoy country life with a zest. Let us make of September a happy month.

Reaper Trial at Catlin.

Some weeks since the Vermillion county Agricultural Society offered the following premiums:

1st premium	\$15	for the best reaper.
2d	" 10	" " "
1st	" 15	" " mower.
2d	" 10	" " "

To be competed for near Catlin, July 5th and 6th, 1864, entrance fee 10 per cent., or \$1 50 on each machine.

We reached Catlin on the 5th at 5 p. m., and found only two reapers at work: Champion's No. 1, made at Springfield, Ohio, and entered by W. H. Garnes, local agent; the Buckeye, made at Canton, Ohio, and entered by Milton Davis, a farmer residing near this place. The Champion was a self raker and did first rate work. The Buckeye did good cutting but the raking was poorly done.

On the 6th only one mower entered: the Buckeye, by the same parties. This machine did excellent work and to the satisfaction of the committee who will make the proper award.

The most interesting part of the exercises of the second day was the trial of the reaper and hand binder of the Messrs. Marsh Bros. This is a combined machine intended only for grain, with the new patent binder attached, on which ride two men to bind, the grain being gathered and delivered to the binders by endless aprons. The trial was made in heavy winter wheat that would turn at least thirty bushels to the acre. The width of cut was five feet, and during part of the trial the machine was drawn by two horses, but as the draft was three hundred and eighty pounds, another team was added that made the work comparatively

easy. A platform could be attached so as to carry a dozen sheaves to be dumped at will for shocking, that would make a further saving of labor. Another trial was made in rye that would turn about twenty bushels to the acre, one man doing the binding without any extra effort.

The great saving in the labor of binding is the travel from sheaf to sheaf in the field, but, in this case, the binder has no traveling, as the sheaf is placed on a form at a convenient height just before him ready for binding.

The saving of labor is very great, as well as the saving of grain. When we compare this work with that of the hand raking, we must conclude that it is a stride in the right direction.

Burson's binder was sent here for trial, but from some unexplained cause was not put in the field.

The system of raking off by hand and binding the old way will soon have its day. What with this binder, Burson's, and the header we may count the old mode nearly played out. The Messrs. Marsh Bros. have made fifty-one of these machines for the present harvest, with the view of giving them a thorough test. We fancy that in building another lot they will have a greater care for strength and durability. We see no reason why this machine will not prove a success, and shall look forward with high hopes of its taking a permanent place in the list of useful farm machines. The machine weighs complete one thousand and ten pounds, and cost at the shop \$200.

Haying Made Easy.

The improvements in haying implements of late years has been very great, in fact, radical. Years ago the sound

of the little hammer tapping on the edge of the mower's scythe ceased in the meadow, when the hardened edge of the cast-steel scythe took the place of the short wide heeled implements that had been made in the common blacksmith shop of the country. Scythe making was then transferred to the ponderous trip hammer, for no common hand forge could make them.—Then we thought mowing was made easy indeed, and great rejoicing went through the land. The man who could mow his acre and a half a day was a man of mark. Now two horses and a boy with a mower, cut six to eight acres a day, without more exertion than to work the corn with a sulky cultivator. In the old time we spread out the hay, and the boy who can now run the mower would then have found work spreading and turning the hay after a good mower; or would have spent four days to each six acres; more than four times the time now required to mow and spread it in the most perfect manner.

Thus it will be seen that when we thought mowing had reached its easy stage we were only hugging a delusion.

When a boy, we have spread and pitched hay many a day with a wooden fork, cut from some sapling having the natural prongs. These were dressed out and sometimes steamed and bent in a rude manner, but these disappeared on the appearance of the cast steel fork of three tines as now made.

We are putting up eighty acres of meadow, mostly wild prairie. We have a Wood's Prize Mower, drawn by the lightest team on the farm and driven by a boy not able to walk, to do the cutting of more than an acre a day, yet he averages six acres a day, working less than ten hours each. With a sul-

ky rake (Furst & Bradley's,) a boy in his eleventh and one in his thirteenth year have done the raking, the larger part done by the younger boy. The next work in order is the bunching, requiring a man, but which is rapidly done. The hay is hauled from these bunches, though if the grass is very heavy it must be put in cock, to thoroughly cure before stacking. The contrast in haying between our boyhood and our boys may well be considered rather radical.

While copperheads and traitors are groaning over the prospective loss of slave labor, the intelligent, loyal men of the North are encouraging mechanical genius to substitute animal labor by the use of new implements for the purpose. With all the cry of short of help, every acre of old land is under the plow, while thousands of acres of new prairie have been broken this season to add to the area of farm crops. Crops have never been better tended, nor the farm work done up in better season than now, in the palmiest days of cheap and abundant farm labor. So much for the new implements that genius has sent to the farm. This is but half the story, for some of our large hay growers are ahead of us, in which wagons are dispensed with and the hay placed in stack with horse power. Verily haying is made easy and taught in one lesson.

Burson's Grain Binder.

We have used this binder the present season and are much pleased with it. Last year Mr. Burson sent us one of these machines, but we could not make it work. About the 1st of July Mr. B. came here and upon examination found

the machine defective. A small piece had been nicked off the casting that held the wire, and the wire cutter had not been properly put in place. This accounted for our failure last year. But there is another difficulty: we doubt if one man out of fifty can work the machine and keep it in order unless he has had oral instruction. The machine is complicated and must be adjusted in the most perfect manner, or it will not work. To draw the wire around different sized bundles, twist the ends firmly, cut off these ends and then hold the end of the cut wire for another bundle, is a feat of mechanism not so easily attained; yet this machine will do all this when well made, properly adjusted and in the hands of a man who knows just how to handle it.

Necessarily the machine is complicated, yet it is strong, certain in its operations and very durable. Any person can be taught to use it; it is easily adjusted and kept in order. Every part must work with exactness, yet when once put in order it is not liable to derangement.

It has two very important advantages over hand raking and binding:— 1st. The cheapness of the work; one man on an average will bind ten acres a day. For this he will use, say in heavy grain, twenty pounds of wire costing, say five dollars. The figures on labor will stand thus:

One binder one day.....	\$2 00
“ “ board.....	50
20 lbs. wire	5 00
	<hr/>
	\$7 50
BY HAND.	
Five binders, one day each..	\$10 00
Board, one day each.....	2 50
	<hr/>
	\$12 50
Profits per day	\$5 00

Fifteen days use of the machine would pay for it. This is on the supposition that men can be had at the calling, but during harvest this is not the case, and this year farmers have had to pay an average of \$2 50 a day and board, besides spending considerable time in looking them up; and in many cases a damaging delay in not getting them.

2d. The saving of grain. We have seen no mode of harvesting in this respect better. Many persons think the header is in this respect perfect, but it is no better, nor can it be more successful in the saving of the crop. But as there are serious difficulties in the way of the universal use of the header, we will only revert to the usual mode of harvesting by binding.

Grain, however short or brittle in the straw, can be bound. Flax a foot and a half high can be put into neat bundles, while barley, with its long, prickly awns can be readily done up into chubby bundles.

The cost of the machine is seven-five dollars; add to this ten dollars for freight and attaching to reaper, and we have the nett cost of eighty-five dollars. Any farmer owning a reaper will find it profitable to have one of these binders attached. If he has not sufficient grain of his own to cut he can find work with his neighbors at paying prices, for if he only gets the actual cost of binding by hand he will earn at least five dollars a day, providing he can cut ten acres. The binder will bind all that any team or machine will cut. On this point there is no room for cavil. We would prefer the binder's station to that of the raker's. The ability of the machine is therefore limited to the number of bundles that can be

presented to it.

For the harvesting of ripe timothy this machine must be valuable, as the binding can be done without waste.

With this machine attached to J. H. Manny's reaper, made by Emerson & Co. half a dozen years since, the boys have done our harvesting. We would not like to say how young the driver was for fear people might think we made men of rather small boys. But this we will say in defense that eight to ten hours was considered a day's work. We believe in saving labor, in part to redeem the curse of Adam.—We do not infer the *curse* entailed fifteen hours of harvest labor, with sweat rolling in cascades, when with a Burson he could do the same in one-fifth of the time with moderate labor and a saving of grain more than equal to the cost of wire and use of machine. Such implements are rapidly placing the farmer on an equal footing with the mechanic whose sweat runs in less copious streams than formerly. What oceans of sweat has not the busy saw, the planer and the morticer saved to the mechanic; and why not allow the farmer to save in the same direction.

The binder has won a place in the list of valuable labor saving implements.

Trade of Chicago.

Through the politeness of Messrs. Hammill & Satchell, commission merchants, No. 32 North Dearborn street, Chicago, we are in receipt of the sixth annual statement of the trade and commerce of Chicago. It may be of interest to our readers to take glances of the growth of the West as indicated by the trade at its great commercial cities. All of the river towns, including St. Louis and Cairo, have been great outlets of Western products that do not come in this report. A portion of the

Illinois river trade goes to Chicago, but the great arteries are the railroads, that gather up these products at a thousand stations.

SHIPMENTS OF FLOUR AND GRAIN FOR 26 YEARS.
The following Table shows the shipment of all kinds of grain from Chicago, for the past twenty-six years :

YEAR.	Wheat, Bushels.	Corn, Bushels.
1838....	78	.....
1839....	3.678	.....
1840....	10.000	.....
1841....	40.000	.....
1842....	586.907	.....
1843....	688.907	.....
1844....	923.494	.....
1845....	1.024.620	.....
1846....	1.509.619	.....
1847....	2.136.994	67.135
1848....	2.286.000	666.460
1849....	2.192.809	644.848
1850....	1.387.989	262.013
1851....	799.380	3.221.317
1852....	941.740	2.757.011
1853....	1.680.098	2.780.258
1854....	2.744.860	6.837.899
1855....	7.110.270	7.547.678
1856....	9.419.395	11.129.658
1857....	10.783.292	6.814.645
1858....	10.909.143	7.498.212
1859....	10.759.359	4.217.654
1860....	15.892.857	13.700.113
1861....	23.855.553	24.372.725
1862....	22.508.143	29.452.610
1863-4..	18.218.532	14.906.934

YEAR.	Oats, Bushels.	Rye, Bushels.
1838....	.....	.....
1839....	.....	.....
1840....	.....	.....
1841....	.....	.....
1842....	.....	.....
1843....	.....	.....
1844....	.....	.....
1845....	.....	.....
1846....	.....	.....
1847....	38.892	.....
1848....	65.280	.....
1849....	26.849	31.453
1850....	186.054	22.872
1851....	605.827	19.997
1852....	2.030.317	127.028
1853....	1.748.493	120.275
1854....	3.239.987	148.421
1855....	1.888.533	92.023
1856....	1.014.547	19.051
1857....	316.778	17.993
1858....	1.498.134	127.608
1859....	1.174.177	478.162
1860....	1.091.698	156.642
1861....	1.633.237	393.813
1862....	3.112.366	871.796
1863-4..	9.909.175	683.946

YEAR.	Barley, Bushels.	Total, Bushels.
1838....	.....	78
1839....	.....	3.678
1840....	.....	19.000
1841....	.....	40.000
1842....	.....	586.907
1843....	.....	688.907
1844....	.....	923.494
1845....	.....	1.024.620
1846....	.....	1.599.619
1847....	.....	2.243.201
1848....	.....	3.001.740
1849....	.....	2.769.111
1850....	.....	1.830.938
1851....	.....	4.646.291
1852....	17.315	5.873.141
1853....	82.162	6.412.181
1854....	41.153	12.932.320
1855....	20.132	16.633.700
1856....	590	21.583.221
1857....	.....	18.032.678
1858....	7.569	20.035.166
1859....	131.449	16.753.795
1860....	267.449	31.108.759
1861....	226.534	50.481.862
1862....	539.195	56.484.110
1863-4..	943.252	54.741.839

The last line represents shipments from April 1, 1863, to April 1, 1864.

Previous to '49 the receipts were all by teams, and these filled the streets so completely that it was often difficult to pass through them.

We have often waited four or five hours for one team to unload, and then had often to weigh on platform scales, carry the sacks of grain into the warehouse and empty in a large bin ; rather a wide contrast to the present system of unloading a train of grain cars at the present day.

We will suppose this grain to reach the city in teams, each carrying forty bushels and occupying two rods ; there would be a daily procession of teams twenty-eight and a half miles long, and at two miles an hour would require 14 hours to pass any given point. Put the whole in one annual processions, and they would reach 8,550 miles.

No such amount of grain could be sent to market by teams, the feat is im-

possible. Suppose these teams were on the road an average of three days each, it would require nearly 5000 hotels with a capacity for 20 teams each to *take them in*.

When we add to this other products, such as flaxseed, field seed, potatoes, hay, wool, beef and pork, the figures become still more formidable; and yet the capacity of our soil is just beginning to be developed. Surely, here is the material for an empire without the South or New England, but we need them to make a perfect whole.

Transplanting Evergreens.

Evergreens can be safely transplanted in the autumn. All of the large evergreens in and about our house grounds were set in October and November, without losing the first one. We have had twenty years experience in raising evergreens, and have come to the following conclusions;

1. Evergreens can be removed during the season of growth, provided the ground is quite wet and that the weather continues cloudy and wet some days afterwards. But as these conditions are not always at hand, we look upon the matter as generally unprofitable, and would not recommend it.

2. All the autumn months and in spring until the new growth begins to show, is the only proper time to remove evergreens, provided always that the soil is damp, that the weather is not dry or windy, for if the roots are exposed to wind or sun for a very short time the tree will die.

3. The very best time is when the ground is wet, the weather rainy and the tree in a dormant state. April, of all months, presents these condition in the

greatest perfection; October is the next best month.

Though evergreens can be transplanted at all seasons of the year and stages of growth, with proper care of watering and shading, yet it will not be found profitable to make the attempt; better wait for the proper conditions of soil and weather, and then attend to it at once.

Miscellaneous.

From the Country Gent.

FOREIGN CORRESPONDENCE.

Preparing the Land for Fall Crops.

MUNSTER, PRUSSIA, June 10, '64.

MESSRS EDITORS—Fall wheat and fall rye being the staple crops in Germany, and considered the most important ones—(Indian corn not ripening at all)—and as, besides, our mode of operating in raising these crops is based on many hundred years experience, I will briefly state how we prepare the land before sowing, leaving it to your readers how much or how little of my remarks may be applicable to American Agriculture. From my own experience I know that, especially in the Western States, this chapter is capable of some improvement yet.

We have two main rules:

1. To give the field as much summer fallow as possible.
2. To give it time to settle between the seed-furrow and the sowing of the seed.

Besides it is important to know that wheat and rye require different modes of treatment. For rye it is best to plow two or three times; for wheat one plowing is much preferable to two. Young farmers wanting to excel, will plow twice for wheat, but this is a bad practice; it loosens the land too much, and the wheat afterwards falls a prey to worms. Of course there are exceptions to this rule; there are cases when two plowings become a necessity even for wheat.

It is also of great importance to have a proper rotation of crops. Wheat, as well as rye, will do best where they are preceded by rape seed or flax, next best after clover or beans, tolerably well after ruta bagas or potatoes, doubtful after turnips and beets. On most soils a good crop of wheat may be followed safely by rye; in fewer cases wheat twice; in even a smaller class of soils wheat after rye may do; only in exceptional cases wheat or rye may follow oats. Oats are mostly the last link in our rotations; they care nothing for fresh manure, and will do well where other crops would require manuring; but the field needs a strong dressing of manure after it has borne oats, so we let it mostly be followed by beets, potatoes or oth-

er root crops, or beans or rape seed, seldom by clover.

I must also remark that we raise more rye than wheat, rye bread being the principal article of home consumption; but of late years the culture of wheat has greatly increased, wheat being a more profitable crop for export.

Now to my above rules:

1. We have one mode for plowing for which in America you have not even a name; I shall call it "skimming." This operation cannot be carried out with an American plow. I have on my farm here seven different plows in use, all made in American shops, from the Moline steel plow and Mohawk Valley Clipper, down to New York Eagle, but with none of them, excellent as they are for deep plowing, can I "skim" the field. Still this is a highly beneficial operation. It consists in just skimming of the top or sod, aiming to leave between every two furrows a narrow strip ($\frac{1}{4}$ to 1 inch wide) untouched. The plowshare therefore is set slanting, going about 1 to $1\frac{1}{2}$ inches deep at the land-side, and slanting out to the surface. We accomplish this operation of "skimming" generally by the common plow (on wheels) and one horse, but of late have introduced plows with two, three and even five shares. I prefer the plow with three shares, as this can be worked by two horses, will finish five acres a day and work well under all circumstances. Now you may ask what this skimming is good for? It gives the land a summer fallow, which is equal in effect to a half manuring. It not only exposes the turned up furrow to the action of the sun and air, but this very furrow serves as a mulching for the layer below, *completely changing its appearance and texture*. This is of the greatest importance. Under such a mulching the land will be enriched by the treasures of the atmosphere. Only compare a field so skimmed three weeks ago with one that has been lying unskimmed, and you will need no more argument. But your readers will say, why not plow deep at once? For two reasons: I want the summer fallow to commence as early as possible. When cutting wheat, for instance, I have all the cocks put up in straight rows running the way I want to plow; and the very next day after the cradle follows the skimming plow. We cannot wait until the wheat may be drawn off, for we would lose one week and the ground would bake. Just examine the soil on the day of mowing, and then again two weeks later where the sun has burned on the naked ground, and you will be satisfied; experience will confirm your observation. This may suffice for the present. It would be impossible to give the fields a deep furrow and keep up with the mowers; by merely skimming this can be done; the deep plowing comes thereafter; the land never becomes too hard for it where it has been skimmed. The surface soil having had the benefit of a fallow is then turned below, and another layer exposed to fallowing. This skimming is much preferable to the work done by cultivators, for in skimming I turn under all weeds and grasses, converting them into manure, while the cultivator makes them into hay. This skimming also does not make the land too loose for wheat. I will merely add that on clover land we generally omit the skimming, giving a deep furrow, directly following the scythe.

We want the ground to settle before sowing—Never sow wheat or rye on new plowed ground, if

you can help it, but give it the last furrow from six to eight weeks before sowing time. This is of the highest importance. The soil then becomes thoroughly pulverized by the alternate action of rain and sun—it rots; aye, it will rise (puff) like a well made dough—I can describe it in no other way—the land must look as if yeast had been put into it and had done its work well. Then is the time to sow. A farmer must be able to discover when this moment has arrived when he walks across the fields, by the feeling of his steps, or by rubbing some dirt between his fingers; if he cannot he is like a physician that cannot feel his patient's pulse.

But my letter is growing too long. Let me close by saying that it will not do simply to cover the seed by the harrow, but that the harrow and roller united must completely pack the ground and destroy all intervals created by the plow. Your feet dare not sink in; the harder the better. Pack it at the bottom; leave it open on the surface. Small clods on the surface are an advantage; dust on top is not desirable. I mistrust all smooth rollers; but with least success have covered the seed (wheat or rye) by Crosby's clod-breaker alone, and finished the whole job without any harrow.

Of course there are soils so infested by certain weeds, and there are climates so dry and burning, that in such localities it will not do to plow the ground eight weeks before sowing for the last time.

L.

The above contains many valuable hints to our prairie farmers, especially plowing land immediately after harvest. Will not our farmers look further into the subject?—ED. ILL. FARMER.

The Destruction of Forests.

The most notable and serious modifications effected by man's agency are those caused by the destruction of forests. The cutting away of wood not only changes the appearance of the landscape, and the character of the spot laid under the axe; when practised to a large extent, its effects extend to great distances—perhaps over the whole continent, and almost revolutionize climate, soils and surfaces. The forest retards evaporation, and offers an effectual barrier to the wind. Its porous soil and still more porous accumulation of vegetable debris absorb and retain the moisture, and its tangled masses of sticks and roots restrain the fury of torrents, and prevent the devastation they might otherwise occasion. From these circumstances, it is free from the extremes of summer and winter temperature; it acts as a constant condenser of moisture in the atmosphere, and promotes frequent and copious showers. When the forests are taken away, these conservative elements go with them. The order and character of the seasons are disturbed; they become more uncertain, the lines that divide them become less distinct.—Noah Webster observed this fact in America even before the commencement of the present century. Said he, in 1799, "When the forest is gone, the reservoir of moisture stored up in its vegetable mould is evaporated, and returns only in deluges of rain to wash away the parched dust into which that mold has been converted. The well-wooded

and humid hills are turned to ridges of dry rock, which encumbers the low grounds and chokes the water-courses with its *debris*, and—except in countries favored with an equable distribution of rain through the seasons, and a moderated and regular inclination of surface—the whole earth, unless rescued by human art from the physical degradation to which it tends, becomes an assemblage of bald mountains, of barren, turfless hills, and of swampy and malarious plains. There are parts of Asia Minor, of Northern Africa, of Greece, and even of Alpine Europe, where the operation of causes set in action by man has brought the face of the earth to a desolation almost as complete as that of the moon; and though within that brief space of time which we call 'historical period,' they are known to have been covered with luxuriant woods, verdant pastures, and fertile meadows, they are now too far deteriorated to be reclaimable by man; nor can they become again fitted for human use, except through great geological changes, or other mysterious influences or agencies, of which we have no present knowledge, and over which we have no control."

He foresees that a desolation, like that which has overwhelmed many more beautiful and fertile regions of Europe, awaits an important part of the territory of the United States and of other comparatively new countries, over which European civilization is now extending its way, unless prompt measures are taken to check the action of the destructive causes already in operation.—*Man and Nature, by G. P. Marsh.*

Perhaps the above views, expressed with authority, will be impressed upon our minds and memories by the long continued and excessive drought of the present season, says the Republican. Let us have more trees. We need them everywhere, along our roads, in our pastures, on our hillsides, in every spot where nothing else will grow,—anywhere but around our houses. There we must let in sunlight. The cottage, deep embowered in shade sounds very pretty and sentimental, but suggests to the thought of experience, damp, mould, rheumatism, fever, pallor, depression and consumption. It is a great mistake in some of our towns and villages, the excessive shade close about the houses, making them look damp and sepulchral, as indeed they are. True, it is very hard to cut down trees planted by one's own hands, but if they shade our houses, it is necessary to make the sacrifice, unless we value shade more than health. We must let in the blessed sunlight upon our houses. What strength or vigor have plants that grow in a cellar or under a board?

Neither do we want trees in our cultivated fields nor gardens; vegetables or crops will not thrive under their shade; and in a pasture, all that are needed are for shades for cattle during mid-day sun. We once knew a man who cut down every tree in his open lots; he "would not be bothered with them in mowing and plowing;" so when they were turned into pasture lots, it was pitiable to see the cattle and horses try to shield themselves under the side of a rail fence. Then he said they were lazy, but we observed that when he stopped for his nooning he always chose a shady spot, and had a very nice "stoop" to rest in, when he took a few moments' quiet.

But we want more forests and larger wood lots systematically preserved. There is a mania for clearing too much, as if that were the great object in life. Some more common sense views are now and then put forth, and "a little farm well tilled," is maintained by some to be more profitable than a larger one under half cultivation. Forests and woodlots, judiciously thinned from year to year, will take care of themselves, and perhaps yield quite as large a profit in the long run as any portion of the farm. Trees are "a growing" even while we are sleeping, and subject to no drought or blight.

Will not farmers, instead of pooh-poohing at this as a "newspaper notion," listen to the testimony of authority and experience cited above, and set about the preservation of trees? If every man will do his part, without waiting for others, the work will be done, and we venture to say that if the record were kept for twenty years, and with the allowance for the enriching effects of the one, and the terribly exhausting draughts of the other, trees would be found even more profitable than—tobacco!—*Boston Cultivator.*

While the East are on the down-hill road, making their country less and less valuable, the Western prairies are improving in regard to timber and forests. Timber belts, hedge rows and orchards all combine to make the country more and more valuable for agricultural purpose and more desirable for residence. The seasons will become more agreeable—the winters more genial and the summers less liable to excess of drouth or deluging rains. Plant trees. Roll on the ball, nor faint in the good work.—Ed.

From the Rural New Yorker.

Galusha and Phoenix—White Willows.

C. D. BRAGDON, ED. RURAL NEW YORKER—DEAR SIR:—I noticed in your paper of May 14th last, an editorial article referring to a conversation which we held in Chicago last September, which is calculated to place me in an unpleasant position, and I hope you will do me the favor of publishing this explanation.

While we were discussing the merits of the white willow as a tree of value for belts and screens—for neither of us have ever had faith in it for a hedge—the conversation turned upon the impositions which unscrupulous peddlers had practiced upon the farmers by selling other varieties under the name of "White" or "Grey Willow." I mentioned that some of our fraternity (nurserymen) were suffering under charges of like swindling. I, myself, had been accused, by peddlers of cuttings, of "selling white willow of my own growing, when I had never raised a tree or plant of it." Whereas, the fact was I had sold only those of my own growing, and which had been pronounced genuine by the highest botanical authorities.

Mr. Phoenix had also been charged with "receiving a large quantity of native willows from a swamp near Peoria Lake." Of the foundation for this charge I knew nothing, but supposed that I convey-

ed the idea to you that I did not believe it was true. If, (as you say), I first spoke of the report to you, I think you are the only person to whom I ever mentioned it, and whenever it was mentioned to me I distinctly said that I discredited it. I regret exceedingly, if I was so unfortunate in expressing myself, as to be thought by you to regard Mr. P. as guilty.

I have known Mr. Phoenix for the last ten years, and had dealings with him at different times, but have never known anything in our intercourse which would lead me to suspect him of dishonesty. Had you written to me previous to the publication of that article, I think I could have refreshed your memory in respect to our conversation, so that Mr. P. should not have seemed to suffer through any words of mine. If Mr. P. is innocent, as I believe him to be, he can soon set himself right through the columns of the *Rural*, which, I am sure, will be open for his vindication.

Yours, for Justice and True Progress.

O. B. GALUSHA.

Lisbon, Ill., June 31st, 1864.

REMARKS.—Of course we cheerfully give space to the above letter. Mr. G. has stated the substance of our conversation in Chicago correctly in the main. It was from him that we first heard this rumor concerning Mr. P. And while we think it true that Mr. G. stated that he did not, or could not believe it true, he conveyed the impression to our mind that the source from which it came, gave it a very bad look for Mr. P. And when Mr. G. spoke to Mr. Minkler about it in our presence at Rockford, and Mr. M. confirmed the statement as having received it from a railroad man who had charge of the transportation of these willows, or knew of their transportation, we thought so too.

But it matters little to the public what Mr. Galusha's opinion concerning this story and Mr. Phoenix is. The fact is, Mr. Phoenix either did or did not cut or procure the cutting of swamp willows at or near, or in the region of Peoria lake. We have given the names of parties through whom he can trace the story that he did not do so, as he asserts, we should think it a matter vital to his interests to so trace it and explode it; if he did do so, of course he will care little about agitating the subject further. Both his own and the public's interest are involved in this question. Of course he will look after his own, and we shall do what we may to protect the public; and no considerations of a personal character will swerve us from our duty in this respect.

Mr. Galusha is right in supposing the columns of the *Rural* are open to Mr. Phoenix for his vindication.—C. D. B.

So long as Mr. Phoenix declines to explain the matter why need others trouble themselves in the premises? The public are satisfied that thousands upon thousands of cuttings of native willow have been cut and sold for the white willow, and they care little who did the selling. Suspicion is directed to Peoria Lake, and Phoenix is accused of being the operator. If he is guilty, the least said the better, if innocent, his denial should exculpate him; but this he chooses to withhold at present.

Will he treat the charges with dignified contempt? We think not, unless he wishes to stand under the obloquy. It is certain that the letters of Messrs. Galusha and Minkler have failed to acquit him; the matter now rests with the railroad man. Who is he—can Mr. Minkler tell us? We wish to know whence came the native willow that have been sent broadcast over the State; and will not our Fulton county friends enlighten us as to the amount of white willow in that county? We pause for a reply.—Ed.

State Fair.

[We well recollect the many complaints that were made last year by visitors to our State Fair, on account of high charges for everything here at that time. We should profit by the experience of last year and try to remedy the difficulty this season. Men who visit Fairs expect to be liberal with their money, but they do not like to have it extorted from them. We should therefore commence early preparations this season to furnish suitable accommodations for visitors at the Fair. The persons who have the matter in charge should commence at once, and when they have perfected their arrangements, give notice through the press, so that visitors may have some assurance of a place to sleep, and a place to get their meals without having to pay thriffling prices.]

One source of complaint can be easily remedied, viz: the high price charged for carting, and the prices charged for carrying persons from the city to the Fair Grounds and return. The city grants a license to every cart, dray, wagon, &c. It is also an easy matter while regulating these licenses, to also regulate the prices for carrying persons or property. There is ample police force provided to carry out all necessary regulations of this kind, and if there is any complaint this year, the city authorities will be held responsible.

The accommodation of visitors to board and lodging is a very difficult matter. Our hotels and boarding houses have not room for more than one-tenth the accommodations required. It will therefore be necessary to provide the next best accommodations in our reach. We suggest the following plan for the consideration of those who have the matter in charge. Have a committee appointed to visit every family in the city and ascertain how many boarders each family can take during the Fair, and particularly how many lodgers each house can accommodate at fair prices. Then arrange the houses by numbers where accommodations are to be had. Then prepare a short circular that will give information to visitors as to what arrangements have been made for their accommodation.

A committee of reception should be in constant attendance at the depot on the arrival of trains and at some designated place on the Fair Grounds. Then persons can be at once informed where to go, and they will know what accommodations to expect. The details of this plan can be easily arranged by an efficient committee; we only suggest the leading ideas.

Respecting this committee we would remark that it should be composed of active, efficient men who will attend to their duties. Men who can devote their time to this object alone. Not such a committee as was selected last year, who had no time to attend to their duties but simply hunted out some of their friends and acquaintances and played the agreeable to them, while the mass of visitors went strolling through the streets through the whole night, denouncing the town and people because they could get no decent place to sleep.

If the right steps are taken the coming State Fair can be made the most pleasant to visitors of any Fair yet held in the State. For the reputation of our citizens and the good name of our city, we hope this matter will be looked to in time.—*Decatur Gazette*.

The above contains sound advice. If the city of Decatur wants the State Fair let them see to it that visitors are accommodated and not overcharged. Last year the city government charged, we believe, three dollars for leave to carry passengers two and from the Grounds. This of itself was a great wrong, for it threw out hundreds of teams from the country who would have carried passengers but for this three dollar tariff. We hope for the good name of the city that no such extortion will be repeated. Far better that the city fathers should look out every farmer boy who has a good team and spring wagon, and encourage him to carry passengers. On several occasions we walked the distance rather than ride in an overloaded wagon with the springs shut together, and with a stand up seat for which fifty cents was charged.

The suggestion in regard to the committee is a good one and should be acted upon. Let a fund be raised to pay this committee by the day, and not depend upon business men to attend to its duties. The city police, who are familiar with all parts of the city, should be on the committee.—People who have friends and relatives in the country would do well to invite them to attend the Fair. We do not wish to draw a picture of last year, but if it is repeated Decatur may close up its beautiful fair ground, for it will be the last of the State Fair at that point.—Ed.

Profits of Sheep—Fine vs. Coarse.

A correspondent of Skohegan furnishes us a statement of the cost of keeping one hundred sheep of the fine, and also the coarse woolled breeds. He says in reply to "Shiloh" that the oily part of a sheep which goes into the wool, as in the Merino, prevents that offensive taste to the mutton of this breed, of which he complains; and that the mutton of the Merino brought a higher price in New York in 1861 and 1862, than that of the coarse woolled varieties. We are not disposed at this time to argue the former nor deny the latter point, but that many other breeds of sheep are superior

to the Merino for mutton, is conceded beyond controversy. We present below our correspondent's figures in regard to the cost and profits of keeping the fine and coarse breeds:

100 COARSE WOOLED SHEEP.

	Dr.	Cr.
30 tons of hay, \$10 per ton,	\$300 00	
500 lbs. wool at 39c,		\$175 00
100 lambs at \$2,		200 00
		<hr/>
		\$375 00

Leaving a balance of \$75.

100 FINE WOOLED SHEEP.

20 tons hay, \$10 per ton	\$200 00	
500 lbs. wool at 45c.		\$225 00
80 lambs at \$1 50,		120 00
		<hr/>
		\$345 00

Leaving a balance of \$145.—*Maine Farmer*.

For the prairie we do not think the above a fair exhibit. Suppose we make a slight change:

100 COARSE WOOLED SHEEP.

	Dr.	Cr.
30 tons hay, \$5	\$150 00	
500 lbs. wool at 80c,		\$400 00
100 lambs, \$3		300 00
		<hr/>
		\$700 00

Leaving a balance of \$550. From this must be deducted other expenses which will largely reduce the sum before the nett profits can be reached.

100 FINE WOOLED SHEEP.

20 tons hay,	\$100 00	
400 lbs. wool,		\$400 00
80 lambs,		240 00
		<hr/>
		\$640 00
		<hr/>
		\$540 00

The difference is really so small that it may well be called a mixed question, and one for each flock master to settle to suit himself. Our own fancy is for the strong, healthy, long wool mutton sheep; but then we are near a good market for mutton. When mutton is also an object we should not hesitate to choose the long wool. If wool was the only object the variety is more a matter of taste. We put the price of hay at what it is worth on the farm, not in the city or village market.—Ed.

Comstock's Spader.

M. L. Sullivant, of Champaign county, Illinois, wrote the *Farmer Club* of New York, in relation to this spader, as we find in the *N. Y. Tribune* of a late date. We also observe that Evans' rotary spader is to be at the State Fair. We shall look forward to the measurement of the crop alluded to with no small interest.—Ed.

Here is a very interesting letter from M. L. Sullivant, the largest farmer in the United States, which gives the detailed cost of procuring corn on the Illinois prairie, by improved machinery. Probably when steam is applied the cost will be much less. Mr. Sullivant says:

BROADLANDS, BY HOMER, Ill., July 6, '64.

I have prepared and planted to corn this season 1,335 acres of land. 844 acres were plowed in our usual manner, say about four inches deep, at a cost of

445 days manual labor, at \$1 50....	\$667 50
890 days horse labor at 50c.....	445 00

Total.....\$1,112 50

Or \$1 31 per acre.

There were spaded (8 inches deep) with Comstock's rotary spader 404 acres, at a cost of

80½ days manual labor, at \$1 50 ...	\$133 87
208 days horse labor, at 50c.....	104 00
291 days ox labor, at 25c.....	75 75

Total.....\$310 62

Or 63 cents per acre.

I have had in operation two horse and three ox machines. One machine was worked 33 days, with the same team of four horses. At the end of the season their condition showed that they had not been worked harder than in ordinary plowing. The ox machines require a team of two or three pairs of oxen each. A portion of the season I worked two of the ox machines ganged with six pairs of oxen, one man managing the team and spaders readily. Four of the spaders are three feet in width, each. For a few days in the latter part of the season I had at work one three feet eight inches wide, which is the usual width of our corn rows. It is proposed to construct the most of them hereafter this width, and attach a self-acting corn-planter. This will be capable of spading and planting one acre per hour, with a speed of 2½ miles, at a cost not exceeding 44 cents an acre, allowing eight hours as a day's work. As a labor-saving implement, and a deep and thorough tiller of the soil, I am greatly pleased with it, and shall watch with a great deal of interest the product of the crop at maturity. At present there is no perceptible difference in the appearance of the corn on the plowed and spaded land, but I shall expect a yield of from 10 to 25 per cent in favor of the latter."

The Club will be very glad to have the result of the yield. If the drouth has been as severe there as it has here, the yield of the deep tilth will be double that of the shallow, and more than ten fold pay the cost.

Freedman's Bulletin.

We have on our table No. 1 of this journal.

"It is the the organ of the Northwestern Freedman's Aid Commission. It will be published once in two months or oftener. The second number will appear in September.

It will concern itself chiefly with the work of the Commission which puts it forth; but will have a watchful eye upon the whole field of operations occupied by kindred organizations, and will hail their successes as its own.

It will not hesitate to discuss, furthermore, questions of public policy directly bearing upon the welfare of the Freedmen.

It will be regularly mailed free to all annual and life electors, and to pastors who take collections for the treasury of the Commission, so far as their addresses are known. Any such who fail to receive it will confer a favor by notifying the Editor."

"All communications relating to the BULLETIN, to secure attention, must be addressed—'Rev. J. R. Shipherd, Box 4617, Chicago, Ill.' Enclosures of money are at the risk of the senders. 50 cents a year."

Such a paper is much needed, not only for the people at large but for the freedmen themselves, thousands of whom are now learning to read. This class of people must be educated and taught habits of industry, or they will degenerate into a low condition. We recollect the freedmen of New York, along the Mohawk river. The schools were denied them and no pains taken to teach them habits of economy, they became in most cases a perfect nuisance, idling their time away in summer, spending their light earnings at the groceries and stealing on all occasions.

We shall look forward to a better state of things now that schools are opened to them; so soon as they become a reading people they will be in the highway of success. We always find a man that we hire, a common laborer who is a reader, a much more valuable hand than those who have no inclination in that direction. Such men are always at their post and have more genius to unravel a knotty subject about their work.

In education there is safety, but ignorance none. Educated demagogues rule the masses of ignorant people and mould them to their will. Were it not for this, the non-slaveholders of the South would have put down the rebellion long ago, without Northern aid. This latter class are told that they must set up a government for the South, while in fact it is for the benefit of the slave owners, and should they succeed this very class will be further degraded, and the benefits of the common school put further from them.

In the course of time, if the colored population become educated they will gradually emigrate South, to a climate more suited to them, where they may set up for themselves; but they must go through God's mill that grinds slow yet sure.—Ed.

Evans' Rotary Cultivator.

The Detroit *Advertiser* says of this new implement:

Within the past year, two inventions have been brought before the public, which are designed to occupy the place of the spade, the plow and the harrow. One of these is known as the Evans'

Rotary Cultivator, or American Terracultor, and the other as Comstock's Rotary Spader. The Evans' Rotary Cultivator (or Terracultor) we had an opportunity of examining during a visit which we made to the farm of E. G. Wilcox, Esq., who had recently received one of these machines for trial. When we first saw it, it was boxed up; but in the course of an hour we had it set up and in complete running order. This machine was calculated to work with two horses, and turned up a twenty-inch strip of land to the depth of eight inches. The working machine runs on wheels, on the axle-tree of which is a large cylinder; behind this is a smaller one; and over both pass chains of a peculiar construction, of (malleable) cast iron. Into the links of these chains, or broad, endless bands, are bolted steel-teeth, chisel-shaped, eight inches long, and which pass into the ground as the cylinder revolves, and dig up the earth, throwing it up behind, and leaving it in complete order as a seed bed. The driver sat on the machine and had nothing to do beyond keeping his horses moving. There were levers and ratchets, by which the working cylinders were lifted out of the ground and thrown out of gearing, so that the machine could be taken from one place to another as easily as a mowing machine.

In the trial we gave this new implement, it was run partly on clay land, and partly on a sandy loam. On the clay the soil was broken up very thoroughly; but to render it complete for seed, would use the roller and fine iron harrow. On the loam, the Evans Cultivator, or Terracultor, did the work of the plow and the harrow, and left it in *more perfect order* than those two implements could possibly do—the surface being similar to that of a well made garden bed, after it has been dug and raked by a skillful gardener.

Our readers will compare this with what we have said of Comstock's Spader. 500 acres against a show of work—the last will win.—Ed.

Immense Strawberry Crop.

The Rochester *Democrat* says: "A single fact which has come to our knowledge relating to the strawberry crop of the past season will doubtless astonish many of our readers. A prominent fruit grower of Western New York, from a single patch of 16 acres, sent to market 1,300 bushels of strawberries of the Wilson's Seedling and Triomphe de Gand varieties. The entire crop was sold at an average price of one shilling per quart, realizing the snug sum of \$5,200, as the product of 16 acres of ground. We doubt whether any other 16 acres in Western New York have yielded the like sum as the result of a single crop. This may be taken as an instance of the profitableness of thoroughly scientific fruit growing."

The above yield would be eighty-one bushels per acre, not a very extraordinary yield if planted and cultivated in hills. A friend of ours at Onarga, informs us that a person by the name of Gould grew 108 bushels on a single acre, of the Wilson, but they were cultivated in hills and had been mulched with rye straw. They sold for about \$900, bringing eight to nine dollars a bushel. The pick-

ing, boxes, freight and commission cost about two and a half dollars a bushel, leaving a handsome profit. Our readers will take these for large yields that only now and then occur, and we trust they will by careful culture lay themselves liable to the same good luck, but not to hope for more than 30 to 50 bushels, until they get it, so that when the surplus comes it will be all the more pleasant.

Summer Pruning.

We have long been in favor of the summer pruning of fruit trees, of all sizes. Full twenty years ago we were convinced of its good results. It is advantageous in two ways: First, by shortening in the rapidly growing branches, it produces fruit spurs for the following year, and brings the trees into any desired form. Second, when larger limbs are removed, the wound, instead of leaving a bare, protruding and decaying stump, beautifully *heals up*, making a perfectly sound amputation.

The period when this pruning should be done, is one of prime importance. We see June recommended, while the trees are in their full first growth. Without having experimented, and looking to the condition of the trees in this month, it does not meet our assent. We do not believe that it is advisable to prune before the first growth of the season is completed, because of the immaturity of the wood, which must produce in the second growth less vigorous shoots, besides losing, to a large extent, the yield of fruit the succeeding year, which is sure to follow judicious shortening in a later period.

In our judgment "summer pruning" should take place between the fifteenth of July and tenth of August—a period when the sap is quiescent and nature is resting awhile from her labors. We speak from our own knowledge of the value of midsummer pruning of trees, large or small.—*Iowa Homestead*.

We prune from June to December, as we have the time and the occasion in the nursery, while our orchard gets very little pruning at any time.—Ed.

A Farmer on Agricultural Education

The *Atlantic Monthly* for July contains the following somewhat satirical view of Agricultural Education, supposed to come from a conservative cultivator in the rural districts:

Two words are beginning to be coupled in the newspapers and to float about in the air, whose juxtaposition is the cause of many a demure chuckle among the rural population.—"Agricultural College." Separately the words command all respect; united, they are a living refutation of the well-known axiom that "the whole is equal to all its parts." On the contrary, so far are our farmers from believing this, that, while they acknowledge each part to be a very serious and important fact, they look upon the whole as the flimsiest of fallacies.

"Gov'ment is goin' to build an Agricultural College. Farmin' an' learnin' marry and set up housekeepin.' Guess Uncle Sam 'll have to give 'em a hist with a donation party now 'n' then Agricultural College? Yes, sir! Well, sir, if you'll show me a man, sir, that's a graduate from that College, that'll ever be seen with a hoe in his hand, I'll give him leave to knock my brains out with it! Yes, sir, an' it will be the best use he can put it to, sir. He'll do less mischief that way 'n any other. Agricultural College! Educated Farmers. Yes, sir, I've seen 'em. Got a grist up in Topsell. Jint-stock farm. The best talent in Essex county's been a-carryin' on that farm, an' nigh about carried it off, an' themselves along with it. Yes, sir, the best talent in Essex county, an' had the farm given to 'em, an' they've sunk a thousan' dollars a'ready. That's what I call a sinkin' fund, sir, That's to begin with. Jones is an educated farmer. He made his cider last fall on scientific principles. Well, sir, I could put an apple in my mouth, an' swim down Merrimac river, an' have better cider 'n that all the way. Educated farmin's a very pooty thing, if a man can be at the expense on't; but when it comes to get a livin' farmin's farmin'. Agricultural College! Yes, sir, farmin' 's a hard life, lookin' at the best side. Soil's light an' runnin' to stones. But this here college stuff's the poorest kind o' top-dressin' you give it. Learnin's a good thing. I've nothin' agin' learnin', but 'ta't the best use you can make on't to plow it in. The only way to promote the agricultural interests of Essex county, sir, is to keep the farmers jest as they are. Greek an' Latin, sir, ain't state prison offenses, but they are sure death to pork 'n potatoes. Minute you educate the farmers they be as uneasy as a toad under a harrow. What kind of a hand would Dr. Hall or Squire Smith make, to come an' take a farm alongside o' me?"

City of Champaign.

IMPROVEMENTS.—Champaign is on the move.—The click of the busy hammer and trowel is heard on every hand. Here and there and everywhere, we see new buildings springing up, and where but a few days before were naked lots, is now beautiful residences and substantial business houses. The scarcity of mechanics, and the high price of building material operates as a temporary check upon the rapid growth of our young and enterprising city. And still a stranger looking at our busy streets would scarcely think that we felt the embarrassment of war. The mammoth brick building on the corner being built by our enterprising townsman, Mr. W. C. Barrett, is being rapidly pushed forward. Mr. B. will be ready to supply all his friends with first class store rooms and offices before cold weather overtakes. Looking to the interest and comfort of the people, Mr. B. has determined to put a public hall in the third story of his building, which he is determined shall not be surpassed in its appointments by any hall in the West. This is right. A good hall is badly needed. On Neil street, Mr. Young is putting the finishing touch on a fine business building. The lower room has already been taken by our enterprising townsman. Dr. Hamer, for the purpose of giving himself room for his mammoth iron store. The Dr. moves

into his new rooms this week—let everybody consult their own interest, and take particular notice of the fact, that Hamer's iron store is on Neil street, in Mr. Young's new suit of rooms. The Champaign University is being rapidly pushed forward, on the other side of the track. The workmen are on the fifth story of this extensive building. The contractor hopes to finish it up this summer. Let all who are seeking a place to give their children a thorough education at a trifling cost, come to Champaign. Without stopping to particularize, it is our honest conviction, that there is no place in Central Illinois which presents better facilities for money making, and where well directed industry can be turned to better account than here. Money invested in any of the ordinary pursuits of life, yields a large per cent. Nor is the mere money advantages all that we have to point to strangers, to induce them to settle here. We point with pride to our various churches, to our excellent schools, to our railroad, and to an educated and intelligent population,—and lastly, though not leastly, to more pretty women and girls than was ever before crowded into a town of this size. Just think of it. It makes us feel young again to see so much of beauty, and the smiles of youth on every hand.—*Champaign Gazette.*

There is no city in the interior making better progress than the above. In this we take a just pride; for when we first saw it in '55, it contained less than twenty houses. We then predicted that from its location it must become an important point. So fully were we imbued with this idea that we made it (the vicinity, 3½ miles distant) our home in the spring of '58.

At no distant day the State Horticultural Society will be invited to hold its annual session here, and the State will accept the offer in fee simple of our magnificent college, to be used in connection with the agricultural college grant.

The amount of grain, cattle and hogs shipped at this point is immense. For fruit growing, no point offers better soil, climate, and access to market. Lands are cheap, and the I. C. R. R. have large tracts near here that they offer on long time and at low rates. Manufacturing is becoming a feature that promises to be an important one.—*En.*

BARK LICE.—Many orchards are being ruined hereabouts by bark lice, which cover the trees in many instances from the roots upward. There have been many remedies published, some of which may be valuable, and some of little or no account. We have frequently been asked "what will kill *bark lice* without injury to the tree?" Heretofore we have never had sufficient confidence in any *cure* to recommend it to the readers of the *COURANT*. Now we have it most unquestionably, and all who will may have clean trees. The process, which we learned from Rev. A. Vedder, of Nepeuskun, who has thoroughly tested, and proved it to be a perfect success, is a simple one, and is substantially as follows:

Trim the tree thoroughly to facilitate subsequent operations. Make a strong lye and apply it freely with a swab to every portion of the tree infested. After a few days examine the trees, and if the lice do not appear to be thoroughly dead, repeat the operation. No fears need be entertained of injury to the trees. Those which Mr. Vedder has thus washed are the most vigorous and healthy looking trees we have seen this summer.

The operation is necessarily a slow and tedious one, and the performer should lay in a large stock of patience before commencing the job. It cannot be done hurriedly and done well, and if not done well, may as well not be done at all. It will pay to do it well, as all will admit who will consider the difference between seeing a tree worth \$5, to \$25 destroyed by lice in two or three years, and spending a half day or even a day clearing the vermin off it. Undoubtedly the best time of the year to apply this remedy is just as soon as you discover that your trees are lousy, though if it should be necessary to do considerable pruning, there may be a choice of time to do that. As however the best authors recommend August for the operation, we recommend every reader of the *Courant* who has an apple tree, to examine it at once, and if lice are discovered commence manufacturing them into soap at once.—*Berlin (Wis.) Courant*.

This bark louse is a bad subject at the best, and should be attended to without delay. We have found the best time to prune in March and April, before the buds began to swell, and then apply the wash of soda or wood lye made into a whitewash. An old tree should be headed back, cutting off all two year old wood, for on this will be found nearly all the live insects. The old scales do no harm and only disfigure the tree; a wet cloth with a little sand will take off all the insects if properly applied, and is a good way to clean up the tree. The insect is either carried by the wind or flies some distance, generally in the direction of the wind, during the few days that they are allowed the privilege of action.—*En*.

RASPBERRIES AND BLACKBERRIES—PREPARE THEM FOR A FUTURE CROP.—The old canes have about performed their duty, and the new shoots are aspiring to overtop their parents. Remember, that the next year's crop will depend entirely upon the new canes. To insure a vigorous growth, cut out all the old ones as soon as the fruit has been gathered—they would never bear again—and unless an increase of stock is wanted, cut out a portion of the weak canes of the present year. This will throw all the growth into the remainder, and secure strong shoots for future fruiting. They are often left too crowded. If in large hills four feet apart, four raspberry and three blackberry canes are quite sufficient for a hill. We prefer them in drills, to be trained upon a trellis, with single canes of raspberries fifteen inches, and blackberries twenty inches distant, the rows four feet apart for raspberries and six feet for blackberries. On rich ground well tended, the growth will be sufficient to fill the trellis, which need not be more than two wires or slats in height. When too aspiring, nip off

the shoot at a reasonable height, to induce side branches. This will make a miniature tree, which, with the Lawton blackberry, has been known to produce six and even eight quarts per cane. Do not head back after the first of August, else the late growth will not harden sufficiently to stand winter.—*Ex*.

If raspberry plants are cut back one-third of their length they will not require trellising. The distance to plant raspberries is four by eight feet, the latter the width of the rows. We know this from actual field culture. When four feet rows are used it is out of the question to work them with a horse, and six feet is too narrow; we now set in rows eight feet wide, and blackberries the same distance. These we should confine to bedge rows of six inches wide, cutting down all sprouts outside of that line, and shall shorten back the plants in the spring. This space will admit of working the ground with a horse and for the convenient picking of the fruit.

Mutton and Wool.

MESSRS. EDITORS:—In addition to the influence of the steamboat and the railroad, affording the means of rapid transit between large cities and remote districts, there are two principal points for consideration in the determination of the choice between the Merinos and the breeds of mutton sheep.

First. The prices of coarse wools and fine wools are steadily approximating. The demand for the former is constantly increasing, while the demand for the latter is relatively diminishing. The popular taste for fine cloths for male attire is greatly changed, while those fabrics requiring heavy and coarse wools are largely multiplied and extended.

Second. Since the introduction of good mutton sheep, the American people are learning to eat mutton. Next to beef in excellence—and by some esteemed more highly—it is more cheaply produced. The demand for it is steadily and rapidly increasing, and the prospect is that it will continue to increase in an accelerated ratio, and that it will in the end overturn the empire of pork.

These are the principal reasons why the production of mutton should be paramount to that of fine wool in all districts within easy access of a good market, and why the production of coarse wool and mutton should not in such districts be considered of inferior importance to that of Merino wool with all the disadvantages of breeding, rearing, and inferior carcass and flesh.

For these reasons it is considered by the best friends of the Merinos that where the market for lambs and mutton is good, the Merino sheep must yield the preferment to the long and middle-wooled sheep. The place of the Merinos is in the south of Africa, the *pampas* of South America, Texas, the prairies of the West, and other regions, which have not been brought into easy communication with some one or more of the large meat markets of the country where high prices are paid. In such places the increase of flocks is sufficient at eighty

per cent. a year; the carcasses of any sheep are of trifling value, and at the same time, as the value of wool is greater, the comparative expense of transportation is less.

We will therefore dismiss the Merino, reminding the reader, however, that the suggestions made have no application to those who breed fine stock for extraordinary prices. The beginner who has concluded to adopt some one or more of the middle or long woolled sheep wants to know how to choose among them. Of these, among many others, there are the South Downs, the Cotswolds and the Leicesters. There are also of recent importations, the Oxford Downs and the Shropshire Downs. These last two are large, beautiful sheep of coarse wool and finely developed bodies. There is also a variety of English sheep called the Lincolnshires, which are said to yield a lustrous wool, in considerable request for imitation of lustre fabrics. But none of these last three have been thoroughly tried in this country; and they should be left in the hands of amateurs and men of wealth until their characters have been further tried.

The choice is therefore to be made among three. The Leicesters have their admirers. They were refined, and for this country spoiled, by Bakewell. They lay on clear fat under the skin like a hog. I have seen this layer of fat three or four inches thick over the shoulders; and we are told that the English graziers sometimes produce it five and even six inches in thickness. This is too fat for American tastes, and in my judgment ends the discussion of this sheep.—*Maine Farmer.*

Flax Culture.

A writer in the Bureau Co. *Republican* thus discourseth on this subject:

It is enough for the farmer to raise the crop and remove the seed. Here the producer should stop and the manufacturer begin. The flax straw should then be purchased by some one prepared with necessary conveniences, machinery and skill, to rot the fibre, break and hatchel—changing the straw into lint—when it is ready like cotton or wool to be baled and sent to the next grade manufacturer. These lower grades of manufacturers for preparing the lint should exist in every neighborhood. The lint when prepared should be shipped to such points, paper mills or flax factories as would pay the best.

ESTIMATE OF PROFIT.

The value of the flax is in its seed and straw. It has been considered a paying crop when raised for its seed alone. The yield of seed is from ten to twenty bushels per acre, and it is now worth about \$3 per bushel. Call the seed twelve bushels to the acre and the value will be,

Seed	\$ 36 00
And one ton of straw	10 00

Total per acre.....	\$46 00
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This estimate is believed to be moderate, very much under what the real value is, where manufacturing establishments exist.

SOIL AND PREPARATION.

A good corn soil, *free from weeds*, is a good flax soil, though rich bottoms and a too sandy soil are not good. New land and old pastures are prefera-

ble. But as few farmers may have these, I propose to prepare stubble land for next year's crop as follows:

As soon as the field is clear of grain plow shallow and let the weeds and grain grow till late in the fall, when plow again quite deep that the subsoil may be acted upon by the frost of winter.—Cultivate shallow in the spring as early as the ground is fit, and then let the ground lie two weeks for the appearance of more weeds, which must be killed by thorough harrowing. If inclined to lumps the ground should be rolled and then harrowed. Sow one bushel or a little more per acre, and cover lightly. Finish by rolling.

Gapes in Chickens.

We cut the following from the doings of the Farmers' Institute, as reported in the *N. Y. Tribune*:

T. A. Goodwin, Indianapolis, gives a better plan than all that have been devised for curing this disease. He would prevent it. He writes as follows:

"In the transactions of the Institute, June 7, you discussed gapes in chickens. Not having seen a case of gapes for nearly ten years, I had supposed them about extinct. I have nothing to say against the learned disquisition as to the origin of the worm which causes the gaping. Whether it ever was a louse or not I cannot say, nor is it material. Ten years ago when Changhaes were young I tested an infallible cure. Take a grain of black pepper, put it in the end of a goose quill so cut as to receive about one-third of the grain, hold the chicken's legs between your knees, open the mouth gently with the left hand, and thrust the quill, loaded with the grain aforesaid, about four inches down its throat; withdraw the quill and the chicken never gapes but once more. It kills the worm nineteen times out of twenty, and the chicken about nine times out of ten; but I never discovered that it pays. In short I long since concluded that in a yard infested with gapes, raising chickens is unprofitable. Some one said new yards are less affected with gapes than old ones, and thereby hangs the preventive. To cure gapes is impossible—to prevent them is easy. You want no sulphur, no grease, no chives, no onions. It consists simply in giving the chickens access to plowed ground. You never see gapes in the yard of a new settler, around the cabin in the corn field. Gapes are peculiar to a high state of civilization and refinement, which deprives the young of its appropriate food. You want no coops with plank bottoms to keep their little feet dry. Put the hen in a movable coop in your garden, and while the young ones will destroy a thousand insects which would injure your garden, they will never have the gapes, I don't pretend to give the philosophy—I only state the fact, and I wish to state it *strong*—chickens having constant access to plowed ground never have gapes."

A BLACKBERRY FREAK.—Some Lawton blackberry bushes in our garden, have been in bloom for over two weeks; berries in all stages of growth may be found upon the bushes, from berries just forming up to dead ripe. But the most singular thing is that the wood is all new, grown this spring—the old canes having all frozen out last winter.—*Decatur Chronicle.*

From the Boston Cultivator.

Malt and Malting.

Barley is chiefly used in America for making malt for brewers. Malt is an article of quite extensive commerce. No other cereal will supply its place for brewing purposes. Therefore, in order to have good malt, a good article of barley is very indispensable. Malt looks like barley that has been sprouted, and the grain tastes quite sweet.

MAKING MALT.—When barley is malted it passes through the same process that it does when it germinates, after being sowed in the soil. The process of malting consists in evolving the saccharine principle. And chemists tell us that the starch is converted into sugar during the process of malting. For this reason malt is sweet to the taste. It is important to keep the different kinds of barley separate, in order to obtain the highest price for it per bushel. We collected the details of malt making at a malt establishment in Phelps, Oneida Co., N. Y., where vast quantities of good malt are raised.

Malting consists of three operations. The first is steeping the barley. This is done by putting the grain into spacious tubs, that will contain 100 bushels, or more. Water is then turned upon it and it is allowed to steep from 40 to 50 hours. It requires not a little experience in malting to know when the grain has steeped just enough, and not too much. It needs to be soft enough to yield to the pressure of the thumb and finger, and not produce a milky fluid. The second process consists in spreading it out on a floor, after taking it from the steeping tubs. The floors are made of stone or of sheet iron. Here the grain germinates. Heat is communicated from furnaces beneath the floor, to promote germination. As the warmth increases, roots appear from the grain, and in the course of ten or twelve days the entire grain will have germinated. The third operation is *kilndrying* the grain. This is done by increasing the heat sufficiently to destroy the vegetative power of the sprouted grain. All the moisture must be driven out of it, and the roots must be made quite dry. Otherwise the malt could not be kept in large bins, as it would heat and spoil.

LOSS OF GRAIN IN MALTING.—It is said that 100 lbs. of good barley will yield about 80 lbs. of malt. Consequently, a loss of about one-fifth of the grain in malting. And if it be not clean and plump,—if oats, buckwheat, or any other grain be mingled with the barley, or if different kinds of barley be mingled, there will be a loss in proportion to the amount of these impurities. Malt cannot be made of any other grain, nor of the seeds of noxious weeds. Therefore, all such impurities lessen the value of barley for malting. Different kinds of barley will not malt in the same period of time. Therefore, if winter and spring barley be mingled, as the two kinds will not malt alike, there must necessarily be more or less loss in malting. The two-rowed and the six-rowed barley will not malt in the same time. If these things are true—and those who profess to know affirm that this is the fact—farmers will perceive the importance of keeping their barley as pure as practicable. It is also affirmed that barley which is more than a year old will not malt well. This will be found correct, so far as the grain has lost its vegetative power. But if the grain will germinate well, it will make

just as good malt, if it be ten years old, as it would one year after harvest. The young farmer should guard against all these sources of loss in the barley crop, and aim always to grow nothing but the pure grain, and to have that of the very best variety and quality, and in the best condition as to ripeness, purity of grain and age; and to be sure and raise only which kind that is considered the best for malting.


S. E. S.

Screens for Shelter.

Every year adds to the proofs of the value and importance of belts or screens of trees as shelter from severe winds to growing plants. An acquaintance in New Jersey recently showed us several accidental belts which had grown up from nursery plantations. They were placed in different parts of his farm, and in every instance the shelter they had afforded to adjoining crops, whether of grain or hay, averaged about 50 per cent. additional to the same crops when exposed to the sweep of winds. This advantageous result extended to many rods from the screens, and then gradually lessened as the distance increased. These screens were mostly some eight or nine years old, and averaged about 20 feet high. By selecting valuable timber trees these belts may be made a source of double profit, as they may be thinned out and the timber used, as the trees extend in breadth and height. Evergreens have a great advantage over deciduous trees by the complete barrier which they afford against the winds of winter when most needed. The white willow at the West has been made to form high screens by quick growth, and if the belts are several trees in breadth, they will make a good shelter. Evergreens, however, have the advantage of not sprouting up or suckering, and they do not commonly injure or exhaust the adjacent strip of land so much as deciduous trees.

In riding through the different parts of the country the fields of winter grain afford to the observing eye many examples of the value of shelter. On the lee side of woods or trees, or of hills or ridges of land, the crops have, in most instances, been slightly injured; while fields exposed to the full sweep of wintry winds have suffered severely. It is true that a thin top dressing of straw or coarse manure in the few cases where applied, have proved a valuable protection. But a more general and continued shelter would be afforded by belts of trees, and we invite the continued attention of land owners to the subject.

We may add that the Norway Spruce usually grows at least three feet annually when cultivated, and two feet on good land when not. Consequently allowing two years for young two feet trees to get well under way, eight years will give a good twenty feet screen when cultivated, and twelve years without such treatment—the distance assunder being some six or eight feet.—*Country Gent.*

 In these times of high prices, it is well to remember that children can be supplied with shoes for less than half the usual annual cost by wearing Metal-Tipped Shoes, to say nothing of stockings destroyed and health endangered by wet feet arising from the childlike habit of wearing out their shoes at the toe first.—*Boston Journal.*

Do Bots Kill Horses?

From a very interesting article in Wilkes' *Spirit* we glean the following:

A lawyer had a case to defend, and called on his friend Dr. B. as a witness to prove that bots in horses is a deadly disease. The Dr. replied that he was not the man to call upon for that purpose, inasmuch as it was his opinion that no horse ever died of the bots. He had looked into the subject, and handed the lawyer a manuscript, of which the following is an outline:

"The manuscript described the bot-fly, which has its habitation generally in the country, and is seldom found in cities. It deposits its eggs on the hair, accompanied with a glutinous substance which adheres the eggs firmly to the hair. These nits are generally deposited about the knees and flanks of the horse, and by the slightest attention can be easily seen. The fly deposits the nits at these points because they are accessible to the mouth and tongue of the horse. After the deposit the fly watches the horse, and as the nits are lifeless, they give no disturbance, and as the fly observes no licking at the place of deposit, and being armed with a weapon by which it can call attention to its desires, it darts to the several places of deposit and stings the horse. The irritation caused by the sting induces the horse to lick the spot pierced by the fly; the warm mucous, or saliva, of the mouth and tongue, dissolves the glutin, the nit is taken on the tongue into the mouth, and with the food passes into the stomach; there the nit is warmed into life, becomes a bot, and commences its growth and lives on the food taken into the stomach, or upon the food prepared for it in the process of digestion. It is provided with a small horny or bony hook at its tail, which it inserts into the mucous membrane or inner lining of the coats of the stomach, and so retains its place. The horse does not seem to be at all pained by this operation, perhaps because this membrane is said to be insensible. If the horse be a good feeder and his master gives him plenty to eat, the horse and bot thrive together. If he is ill fed, the necessary nutriment is unprovided, and here the troubles of the horse begin. The bot is a cormorant; from the empty stomach of the horse it is unable to procure its aliment; holding by the hooks at the tail, it throws its head about in search of food; finding none, in the agony of hunger it beats its head against the sides or coats of the stomach, applies its mouth to the mucous membrane. This rubbing and violence produces irritation and inflammation, the stomach contracts, the horse becomes fretful, suffers intense and unendurable pain, bites at his flanks and at last dies of his torture. The death of the animal shuts up the portals of respiration, and the air bursts through the stomach in every direction, perforating it with holes; the bot at once appreciates its condition, and in the hope of escape from the fallen ruin, relaxes its hold by the tail, makes for the holes, crawls into and through them, and so, on opening the animal, appear to have eaten through.

If I remember, he said it was a small white worm with a black or brownish head, and upon dissection it was found that it was provided with no instrument or tool with which it could make, eat, scratch, bore, or in any manner make a hole for itself. It had a smooth mouth and lips, membra-

nous, and lived by suction—it would neither bite nor bore more than an oyster. When the horse is well fed, the grub eats so voraciously, that, gorged, it becomes torpid, and in this condition lets go its hold by the tail, and passes with the faeces. Country horses almost always have more or less of these grubs, especially those that run to pasture. If the horse be kept with a full stomach, the bot gives no disturbance, and through the winter will void them, to suffer a return, if let to pasture, the following summer. The reason why no medicine will eject them arises from their holding on by the hook, and their refusal to partake of the medicine. Dietetics alone must be resorted to.

The statement generally made by persons recommending a horse, 'He is a good feeder,' probably arose from this circumstance, and that owners of horses had discovered that such horses would be able to withstand the bots, whilst the horse which had no appetite, or ate but little, became useless and died from its effects. Strong, healthy children in the same way, void them by keeping their stomachs full, whilst the weak and poor feeders become rickety and feeble, lose the appetite and die."

TOP DRESSING GRASS LANDS.—The New England *Farmer* gives some good advice on this subject, from which we extract the following:

It is the practice of many farmers to top-dress their grass lands with composted manure as soon as they conveniently can after getting off the hay crop. It is a good practice. The manure protects the roots a little from the rays of the sun, and the first shower washes some of its nutritious properties into the soil and about the roots of the grass, so that they are stimulated to throw out new sets of leaves, which afford a still further protection, both to plants and the manure. The surface is also sufficiently hard in summer to allow the teams to pass over it without cutting ruts, or being poached by the feet of the animals drawing the load.

We refer to the matter at this particular time in order to suggest to those who have grass lands newly laid down—that is, that have been mowed only one or two years—not to postpone the application of some sort of dressing, if they desire to continue cutting a remunerative crop for several years. The mistake made by most farmers is, in postponing the top-dressing too long. If clover is allowed to seed, and is then cut, the roots die and there can be no further crop from them. If the clover is cut while in blossom, there will be a second crop the same year, and perhaps two crops the succeeding year, if the land is rich. Red top and herd grass will continue longer than clover, but the roots of both of these gradually die out, or yield to stronger grasses, until the whole crop is changed from the sweet and nutritious grasses just named to the wiry "June grass," weeds, or some other plants of little value. All this comes from not top-dressing in season. If this were done, even though but slightly, after the first crop is cut, and afterwards each year, the roots of the grasses sowed would be kept in a vigorous condition, and our mowing fields would not "run out" as they do now. Under such a practice, moist, and naturally good lands would yield a ton or a ton and a half of hay per acre for eight or ten years in succession, with more certainty than they now yield two-thirds that amount.

Time to Harvest Wheat.

A very interesting experiment to determine the proper time for cutting wheat, is reported in full in the Germantown *Teegraph*, reproduced from last year. We regret that our limits do not permit us to give the article entire. A field of wheat of uniform growth and appearance was taken, and two sheaves cut and labeled each morning from the 26th of June to the 20th of July. Each lot was left in the field one day and then placed under cover, and at an appropriate time thereafter separately threshed. Equal measures of each was then carefully weighed, with the following results:

The measure of that cut on

July 20,	weighed	18 pounds,	14 ounces.
" 19	"	18	" 14½ "
" 18	"	19	" 2 "
" 17	"	19	" 3 "
" 16	"	19	" 6 "
" 15	"	19	" 1½ "
" 14	"	19	" 8 "
" 13	"	19	" 11 "
" 12	"	19	" 12½ "
" 11	"	19	" 14 "
" 10	"	19	" 13 "
" 9	"	19	" 12½ "
" 8	"	19	" 10 "
" 7	"	19	" 7 "
" 6	"	19	" 6 "
" 5	"	19	" 5½ "
" 4	"	17	" 3 "
" 3	"	19	" 1 "
" 2	"	18	" 13 "
" 1	"	18	" 10 "
June 30	"	18	" 6 "
" 29	"	18	" 5 "
" 28	"	18	" 0 "
" 27	"	17	" 10 "
" 26	"	16	" 2 "

An experienced miller to whom the samples were submitted without any knowledge of how they were produced, selected that cut on July 11th as the best, but hesitated between it and that cut on the 9th and 10th. The parcels cut July 8th, 7th, 6th and 5th, looked as well as the other, but the miller reported them lighter, and said they would dry away more. The experiment was continued by reducing the parcels cut after July 4th to four lots, and grinding them separately. The first or earliest lot yielded 75 per cent. of flour; 2d lot, including the parcels cut on the 9th, 10th and 11, yielded 78 per cent.; 3d lot, 76 per cent.; 4th lot, 74 per cent. The flour from the 2d lot was pronounced by far the best.

During the first six cuttings the grain when crushed between the fingers left nothing but the husk and a fluid resembling city milk. During the next five it seemed to become much thicker and the husk became more solid. That cut on the 8th, 10th and 11th, when crushed, seemed to be a soft pulp with no juice. That cut on the 12th could be broken very readily, while the last cutting cracked under the teeth, like wheat which has been kept all winter.

All the members of the party instituting the experiment resolved unanimously, that the proper time to cut wheat is when the grain, in the middle of the ear, can be crushed between the fingers, and leave nothing but the husk and a thick pulp, without any fluid around its edges.

WHAT SHALL WE EAT?—Is an important question in these times of high prices. Dr. Hall, in a late number of his *Journal of Health*—good authority, by the way—says the cheapest articles of food at present prices are bread, (especially corn meal), butter, molasses, beans and rice. He shows that 25 cents worth of flour, at 8 cents per pound, contains as much nourishment as \$2 25 worth of beef at 25 cents per pound; and that a pint of white beans, costing 7 cents, has the amount of nutriment of 3½ lbs. of beef at 25 cents per pound, or, in other words, the roast beef diet is *twelve times* as expensive as the beans. Furthermore, a pound of Indian meal will go as far as a pound of fine flour, costing nearly twice as much. Here are some of the common articles of food, showing the amount of nutriment contained, and the time required for digestion:

	Time of digestion.	Amt. of nutriment.
Apples raw.....	1 h. 50 m.	10 per cent.
Beans, boiled.....	2 h. 39 m.	87 per cent.
Beef, roasted.....	3 h. 30 m.	26 per cent.
Bread, baked.....	2 h. 30 m.	80 per cent.
Butter.....	3 h. 30 m.	96 per cent.
Cabbage, boiled..	4 h. 30 m.	7 per cent.
Cucumbers, raw....	—	2 per cent.
Fish, boiled.....	2 h. 9 m.	20 per cent.
Milk, fresh.....	2 h. 15 m.	7 per cent.
Mutton, roasted..	3 h. 15 m.	30 per cent.
Pork, roasted....	5 h. 15 m.	24 per cent.
Poultry, roasted..	2 h. 45 m.	27 per cent.
Potatoes, boiled..	2 h. 30 m.	13 per cent.
Rice, boiled.....	1 h. 00 m.	33 per cent.
Sugar.....	3 h. 30 m.	96 per cent.
Turnips, boiled...	2 h. 30 m.	4 per cent.
Veal, roasted....	4 h. 00 m.	25 per cent.
Venison, boiled..	1 h. 30 m.	22 per cent.

According to the above tables, cucumbers are of very little value, and apples, cabbages, turnips, and even potatoes, at present prices, are expensive eating. Some vegetables and fruits, however, should enter into the family consumption. Among those which contain the most saccharine matter, sweet potatoes, parsnips, beets and carrots, are the most nourishing. Roast pork, besides being an expensive dish, requires too lengthy a drain upon the forces of the stomach to be a healthy article of food.

SHRINKAGE OF FORAGE PLANTS IN CURING.—John Wells, of Dorchester, a distinguished agricultural writer of his time, said the loss of weight in drying green herbage will be found to vary essentially as compared with that of Scotland. It should be premised that the time of cutting the several grasses, &c., in the following statement, was that usually practised by husbandmen in this Commonwealth. Of 100 lbs. of forage plants cured in 1822, the product was as follows:

100 lbs. of green white clover,	gave of hay	17½ lbs.
100 " of red clover,	"	27½ "
100 " herds' grass,	"	40 "
100 " fresh meadow,	"	38 "
100 " tall grass,	"	39 "
100 " mixed, 2d crop of rowan	"	18¾ "
100 " corn stalks,	"	25 "
100 " cut in milk with ear	"	25 "

It should be observed that the weight will vary, from ripeness and other causes, such as wetness of the season, shade, thickness of growth, kind of soil &c. The above statement will be read with interest at this time.—*Boston Cultivator*.

Morgan Horses.

Among the best horses of the Northern and Eastern States, are those called the Morgans, in not a few characteristics resembling the Arabian horse. They are well known and esteemed for activity, hardiness and docility; are adapted for all work; good in every spot, except for races on the turf. Some of these horses have been known as fast trotters. They are lively and spirited, lofty in their carriage and elegant in their action, carrying themselves gracefully in the harness, and, for the saddle none exceed them. These horses have size in proportion to their weight; bone clean, sinewy legs, compactness, short, strong backs, powerful lungs, strength and endurance. A mixture of the Morgan blood, though small, may be easily known from any other stock in the country. There is a remarkable similarity prevailing in all of this race. They are known by their short, lean heads, wide across the face at the eyes; eyes lively and prominent; open and wide in the under jaws, large wind-pipe, deep brisket, heavy and round in the body, broad and short in the back, short limbs in proportion to size, broad quarters, a lively quick action, indomitable spirit, move true and easy in a good round trot, and are fast on a walk. Their color is a dark bay, chestnut, brown or black, with dark flowing mane and tail; their height is about fifteen hands; the head is well up, and they move without a whip. Like the Arabian, they are high mettled, but uniting the playfulness and good humor of the pet lamb, with the power and courage of the war horse, whose neck, in the language of Job, "is clothed with thunder, mocking at fear and rejoicing in his strength." These horses have been sold as high as two thousand dollars, and a number of them occupy the stables of the Emperor of France.—*Am. Stock Journal*.

PRAIRIE TEA—JERSEY TEA—AMERICAN TEA.—Charles Boynton writes from Lyons, Iowa, as follows:

"Inclosed with this I send a few of the tip-ends of the sprouts or branches of a shrub that grows plentifully throughout this region, on the higher portions of the prairies, and which has been called by some Prairie Tea, but is generally known as Red Root. It grows about two feet high, in clusters of shoots springing from the root, or from the shoots of last year's growth—I think both. The root is large when compared with the top, is very tough and runs out in horizontal branches to a great distance. It is much dreaded by prairie breakers, and a higher price is paid for breaking up land in which it abounds. It is of a red color and is very astringent. The leaves of this plant have, no doubt, in decoction, somewhat of the flavor of tea, and they resemble it in shape and other characteristics. I am led to suspect that it may contain *Thein*, and I have or can gather sufficient of it for an analytical test, if such can be had. I think it likely that the same thing has been presented to you before, and that you are better acquainted with it than myself. If you see fit to show it to the Club, I shall probably learn something about it from the *Tribune*."

Yes, sir, you will learn that it is the identical article that was extensively used after "the great Boston tea party," and during the Revolution was

called "Jersey tea," and of late has been called "American tea," and as such has been gathered and cured to sufficient extent to fill a great many empty tea chests, and from these the tea has been retailed in this city to considerable extent; a good deal of it has doubtless been sent to the country and sold at a dollar a pound to the very persons who have had to pay an extra price for breaking prairie that was covered with the identical shrub bearing the leaves which furnish their tea-party beverage. The leaves of this shrub do not contain *Thein*, nor do they contain anything deleterious, and they do make rather a pleasant beverage, which is a very good substitute for the real Chinese article. The leaves should be gathered when fresh and green and dried in the shade, or else like tea leaves, by fire heat in shallow pans, stirring constantly. We recommend our Western friends to try a little of the abundant "prairie tea."

The above we cut from Solon Robinson's report of the Farmers' Club in the *N. Y. Tribune*. Few of our readers, in Central and Northern Illinois, who are not familiar with the Red Root of the prairie breaker. The root is of solid wood and often three inches in diameter. The top is annual; that is, it is always burned to the ground, and thus makes an annual growth. If protected from the fire we do not know that it could not stand the winter.—Ed.

LIGHTNING RODS.—S. H. Sutton, Naples, N. Y., says:

"I am an attentive reader of the doings of the Farmers' Club, and would be pleased to have you present a subject to the Club for discussion, viz: Are lightning rods a security and protection to buildings against the effects of lightning?"

At this time there are two or three splendid teams and carriages fitted up for the purpose of 'rodding' every man's house and barn that they can by eloquent arguments, make to see the great danger of lightning, and the 'great protection' their rods will give to life and property. Many of my neighbors never have been struck yet with lightning; yet they have been struck by these peddlers with the idea of their danger, and badly struck with the bill of expense. Now, before I 'rod' my house I want to know what the Club thinks of the utility of lightning rods."

Well, sir, if you have been, as you say, an attentive reader of these reports, you do know that the subject has been most fully discussed, both by lightning rod makers and by those who disbelieve in their utility, and that the evidence adduced has always been largely in favor of not incurring one dollar of expense for a conductor. The reasons for this conclusion are, that we cannot find that they have ever saved a building, or that an insurance office will take a risk for one cent less upon a house with than it will without conductors. Besides, we do know that buildings furnished in the most "scientific" manner with conductors, have been struck by lightning, and some of us would not accept a conductor as a gift. That is what the Farmers' Club thinks of their utility.—*Solon Robinson in N. Y. Trib.*

The Vegetable Girl.

IN RHYME.

Behind a market stall installed, I mark it every day, stands at her stand the fairest girl I've met with at the bay; her two lips are of cherry red, her hands a pretty pair, with such a pretty turn-up nose, and lovely reddish hair. ♥

'Tis there she stands from morn till night, her customers to please; and to appease their appetites, she sells them beans and peas. Attracted by the glances from the apple of her eye, and by her Jersey apples, too, each passer by will buy.

She stands upon her little feet, throughout the livelong day, and sells her celery and things—a big feat, by the way. She changes off her stock for change, attending to each call; and when she has but one beet left, she says, "Now that beats all."

THE CROPS IN KANKAKEE.—We think from what we can learn of the balance of the State, that Kankakee county will be the banner county of the State on crops this year. She has harvested or is growing a full crop of all the staple farm products. Wheat is a full crop, and has been harvested without injury; oats a heavy crop, and the corn prospect is truly grand. The ears this year are earing up where the tassels have been in former years.—*Kankakee Gazette*.

SALT FOR SHEEP.—Salt is not, perhaps, quite as necessary for the sheep in winter as in summer, but still, all good shepherds regard it as indispensable. It should be fed as often as once a week, in the feeding troughs, or by brining a quantity of hay or straw. The Vermont breeders almost universally keep it standing constantly before their sheep in boxes placed in the sheep houses. My friend, Gen. Otto F. Marshall, of Stuben county, New York, has an excellent and economical way of feeding it. The orts when taken from the sheep racks are thrown into a box rack wider and considerably higher than the common ones and placed under a shed. The orts are sprinkled with brine, and the sheep when hungry for salt go to the ort rack and consume them. Thus all the hay is saved.—*Practical Shepherd*.

MOWING THE ROADSIDES.—The law excluding stock from the roadways of the States is inducing a new order of cleanliness. It is purchasing tidiness. It is made the interest of the farmer to mow the roadsides. Good crops of grass are cut there, and we notice they are being harvested generally. We also notice that in some cases the weeds, thistles and elders are kept standing. While we would not urge cutting them with the grass scythe, we do urge for the farmer's sake, that the bush scythe follow the grass scythe. Do not let the roadsides longer remain nurseries of weeds for the farm; the labor expended in cutting them is time and labor saved in the end. Just now the elders are in bloom, the thistles are heading, the daisies are making seed, and should be cut at once to save the extension of this army of occupation.—*Rural N. Y.*

Crops in Champaign County.

GRAIN.—The new crop of oats and wheat is now beginning to come in quite rapidly, and the enterprising farmers of Champaign county are reaping a rich harvest of Greenbacks for their labor. The horn of plenty has been emptied in glorious abundance upon our people. Ceres has cast her golden showers in lavishness on every hand, and everybody is rejoicing because of abundant crops. Never in this State were farmers better paid for their labor than now. All kinds of farm products command high prices. Wheat at the present writing is worth \$1 90 per bushel, oats 53 cents, flax seed \$2, potatoes \$2, apples \$1, &c. Our warehousemen have all thrown open their ample granaries, and ready and waiting with loads of Greenbacks for the farmers.—*Champaign Gazette*.

EGGS OF THE BEE MOTH.—The eggs of the bee moth are entirely round and very small, being only about the one-eighth in diameter. In the oviducts they are ranged together somewhat in the form of a rosary. They are not developed successively like those of the queen bee, but are found fully formed in the ducts, a few days after the moth emerges from the cocoon. The female deposits them in small parcels or clusters on the combs. If any one wishes to witness the discharge of eggs, he need only seize by the head a female two or three days old, holding it between his finger and thumb. She will instantly protrude her ovipositor, and the eggs may be seen passing along the semi-transparent duct.

That the moth does not deposit her eggs in the pollen of flowers as some imagine, but on the combs in the hive, is very certain. I have repeatedly found little clusters of eggs on combs which I removed out of the hives.—*Dr. Donhoff*.

NEW STOCK YARDS.—The new stock yards of the Chicago, Burlington & Quincy R. R. Co., in Chicago, are being fitted up in the most extensive and convenient manner, and will add greatly to the facilities for receiving and shipping stock of all kinds. Four of Fairbank's Stock Scales, forty-two feet long, and wide enough to weigh an entire car load at once, are being built in the yards, so that all stock received or delivered can be promptly and correctly weighed.

SANITARY COMMISSION.—We are in receipt of a circular from Col. John R. Woods, agent of the State Sanitary Commission, giving notice that a building will be erected on the Fair Grounds to receive contributions for Sanitary purposes. We hope every person attending the Fair will contribute something toward this noble object. Take a bushel of onions, a sack of potatoes, a bushel of dried apples or some ready cash; let the amount be something from each individual, and our soldiers will be all the better off for the effort.

Editor's Table.

BAKER & PHILLIPS - - - PUBLISHERS.

M. L. DUNLAP, Editor.

SPRINGFIELD, ILLINOIS, SEPT., 1864.

The heat of summer has become more subdued; the air is hazey and we can see the changing season. No more the fierce heat of the dog days is shed down on us. The fields where waved the small grains are russet, or present the browned furrow where the thrifty farmer is already preparing for the next year's crop; he wants the sun and air, the dews and rains, to prepare the elements of plant life, and is now making of his stubble a fallow, that will be of value. Instead of growing a crop of autumn weeds to impoverish his soil, he is calling in the elements to make it all the richer. He is manuring his land with brains from which he will harvest great returns.

THE TRIBUNE STRAWBERRY.—We saved the Monitor and Brooklyn Scarlet, each of which has a dozen new plants, showing that they are vigorous growers. Mr. Fuller is to send us the Col. Ellsworth, when the list will be complete. We like the way in which Mr. F. puts up his plants to send by mail, as they come in good order. In all other cases we have received them in bad order.

WOOD'S PRIZE MOWER.—We purchased one of these mowers early in the season. We know very well that there are several very excellent mowers besides this one, but there is one very serious fault with the majority and that is the want of a good supply of all the parts that are liable to break or wear out. Wood is the only one that we know of who keeps a full supply of these things at all points where his machines are used or sold. We would not hesitate to decide between two or more good machines on this point. Several machines are on sale here, but no other one has a supply of extras. One of our neighbors has a good mower, but breaking a section out of one of the sickles he has had to send hundreds of miles after a new section. His loss will be not less than five dollars in the delay by using the one sickle, for his team must stop while it is being ground, and should anything happen to it he is out of work, when team and hands are idle. We have had too much sad experience in this line to run any more risk than we are obliged to. We have one farm implement, a most excellent one, by the way; but we brok-

one of the parts and had to telegraph a long distance for a duplicate, and after waiting three days it came, with no trifling charge, compared with the actual cost of the part needed.

We were going to speak of the Wood mower, and how we liked it, but got off the subject. After cutting ninety acres of meadow, and expending half a dollar for a new pin and for shrinking the wrist, we sold it to a neighbor for \$8 60 less than its cost, repairs included, and received cash in hand. Eighty acres of this grass was prairie and part of it very rough at that. The team used was the lightest of three that we have, and they came through the work with the least possible effort.—Ten cents an acre for the use of a mower is not a large outlay. This same mower will doubtless cut two hundred more acres this season. Our hay having been cut early, is of the best quality; and we do not have the mower to house nor lay out of the use of the money. The wear is so slight on this mower that it must be used a long time before it will sell much below its cost as a second hand mower.

SUMMER APPLES.—There is not a supply of good summer eating and cooking apples. About one-third of our own orchard are summer apples, but we shall add another thousand trees to it this fall. Early Harvest, Red June, Red Astrachan, Kirkbridge White, Early Pennock, Sweet Bough, etc., have the money in them. At this date they are in demand at two dollars a bushel. The truth is, we have never known the market to be fully supplied with summer apples. The Keswick Codlin is a great bearer and should supply the market with cooking apples, but orchardists are afraid that they will overdo the market with them. But of this we apprehend no immediate danger, so long as Codlins will bring fifty cents to a dollar a bushel at the orchard, no complaint should be had on that score. We have two hundred and twenty-five trees of this variety, now six years planted, paying us a goodly sum, and we would not complain at several thousand more trees. If you cannot sell the apples, you can make vinegar, and dry apples of the surplus. The trees are not plenty in the nurseries. We have grown them very largely, but the demand for the trees has reduced our stock very materially. We shall endeavor to supply our immediate local demand for the summer apples within the next dozen years. We have no objection to growing the summer apples at double the price that winter apples bring, which is usually the case in all our markets. A very common cooking summer apple brings a better price than the best of those for winter.

THE SUBSOIL PLOW.—No farmer should allow himself to be without this plow. Deere and Co., of Moline, make a most excellent one, called Mapes' Subsoil Lifting Plow. It is of steel and just the thing with which to prepare orchard ground; and all soils when you are in need of large crops. Is a farmer in debt?—get a subsoil plow and make a larger crop, just enough more to pay it off. Does he want that other piece of land?—subsoil for the required dollars. Does he want a barn or new house?—put in the subsoil plow. In fact, if you want money pretty badly, use the subsoil plow.

KENTUCKY NURSERIES.—Can fruit and ornamental trees come from Kentucky—from Western Kentucky, amid rebel hordes and Jeff. Davis sympathizers? In answer to this, we have the catalogue of Messrs. George S. Curtis & Company, of Maysville, Kentucky, a pamphlet of fifty octavo pages closely printed, containing a list of all the heart could wish in the useful and ornamental. The trade list of the same establishment is also extensive and worthy the attention of tree planters and dealers. The mild climate of Western Kentucky offers advantages in the propagation of many varieties of trees and plants. Among these may be counted the Kentucky coffee tree, the more hardy magnolias, rhododendrons, azelia, althea, etc.

THE OLD ROCHESTER NURSERY.—In the advertising department will be found the card of this old establishment. The agent, Mr Perkins, called on us a few days since, and we are satisfied that he at least is a simon pure agent, and not one of the tree peddling humbugs that float from place to place. We shall therefore expect that his customers will get what they bargain for. He is making rather a specialty of the more hardy magnolias, such as the acuminata, tripelata, purpura and conspicua, of which he is selling trees eight to ten feet high and of blooming age.

We are not prepared to say how well these magnolias will stand on the prairie, but Mr. P. assures us that he has found them in different parts of the State doing well and appearing perfectly hardy. In Indiana and Ohio we know the magnolia acuminata is among the most hardy of ornamental trees, and we shall have confidence in it here. The *Country Gentleman* says that this nursery occupies 250 acres.

THE GRAPE CULTURIST.—We have numerous letters in regard to this work. It is first rate. Send to Andrew S. Fuller, Brooklyn, N. Y. The price is \$1 25.

AGRICULTURAL COLLEGE GRANT.—We learn that Gov. Yates has appointed the following gentleman a committee to report some plan in regard to the above:

Rev. T. M. Eddy, Rev. W. W. Evarts, Hon. J. H. Muhlke, Chicago; Hon. C. B. Lawrence, Galesburg; Kersey H. Fell, Bloomington; J. M. Sturtevant, Jacksonville; Hon. Cyrus Edwards, Alton; Gen. Haynie, Cairo.

All we ask is that the fund is not used to bolster up some debt-ridden or sectarian institution.

The donation was intended for the benefit of the farming and mechanical interests, and it is due these classes that the school to be instituted under it, be free from all other isms.

Neither do we want model farms or model workshops, but schools in which to educate these classes in their respective callings.

CHESS IN WHEAT.—Now is the time to dispense with chess in wheat: don't sow it. See that not a grain of chess invests your seed wheat. The seed will come up in the low ground, but unless the soil is very wet it will not grow on the high land; hence, if the wheat is winter killed at all, it will be more so in the low than on the high land, and it is just there that the chess will be most sure to come up; and it is there it will tiller out the best and make the best show in the crop. That the seed will lie in the soil for years and then grow, we have the best of testimony. You can have enough chess without sowing it; birds scatter it far and wide, so you need not have it in your seed wheat. We now have plenty of fanning mills that will clean this pest out of the seed.

YELLOW SEED IN FLAX.—In some lots of flax seed coming to market, we observe a large percentage of this seed. This is taken out of the flax seed at the ware house and thrown away? No such thing. It is sent East and brings a good price, but the farmers get nothing for it. The oil of yellow seed is an essential oil and valuable for burning and for machinery; but as it will not combine with the paints and dry, is not only of no value for the purpose, but a decided damage to it. Pure linseed oil will readily unite with the paint and *dry in*, but a small percentage of yellow seed makes it like lard, and it will not dry.

A BEGASSE CARRIER.—In all corn mills a begasse carrier should be used so as to load the refuse cane, on a wagon rack, every load of which should go to the orchard or the pasture lot, direct from the mill; do not let it lie about the mill to sicken the air where all should be sweet and clean.

ILLINOIS NATURAL HISTORY SOCIETY. — The second volume of Transactions is now being printed. It will contain 300 pages, and will be beautifully illustrated with engravings on stone.

- The following are among the articles :
- 1st. Prof. Turner's address on Education, at the dedication of the Museum.
 - 2d. Dr. George Vasey's new Catalogue of the Plants of Illinois.
 - 3d. Origin of the Prairies, by Prof. Alexander Winchell.
 - 4th. Trees in Winter, by Dr. Frederick Brendel, with fifty illustrations.
 - 5th. B. D. Walsh's Papers on Entomology.
 - 6th. Natural Resources of our Commonwealth, by C. D. Wilber.
 - 7th. The Avalanche of the Ocean, by Prof. Turner.
 - 8th. Limits of Aborescent Vegetation in Illinois, by Dr. Vasey.
 - 9th. New Theory of Respiration, by Dr. J. A. Sewal.
 - 10th. The Illinois Coal Fields, by C. D. Wilber, with forty illustrations.
 - 11th. Chess and Wheat.
 - 12th. Miscellaneous Papers.
 - 13th. Secretary's Report.
 - 14th. Curator's Report.
- Address C. D. Wilber, Editor, Box 385, Bloomington, Illinois.

COTTON.—We have often asserted that cotton can be grown as far north as latitude 40. We think it will pay at 25c. a pound. The plants can as easily and as safely be transplanted as the cabbage. We have plants that were set out about the middle of June that have been in bloom for more than a week. The plants are not large but they can be set close, and will thus produce a fair crop. When the sweet potato was first introduced few thought it would succeed ; now nearly every farmer grows them. In the next place they could not be kept until January, much less wintered over. Now this is done in our common prairie houses by many persons, and soon it will become a common thing to do it. When cotton plants are grown in hot beds and set out the middle of May in good, rich, well cultivated soil, we shall have a good crop. Perhaps not every year, for even corn has been known to prove a short crop at times, but a good average yield. Thirty years ago no one thought cotton a difficult thing to grow. Perhaps some other crops can be grown at a better profit and exchanged for cotton ; if so we have no complaints to make if it is not grown. We write this June 25th, and have the plants in bloom to verify our position.

The Temperature.					
THERMOMETER IN THE OPEN AIR.					
Day of Month.			7 A. M.	2 P. M.	9 P. M.
1864.	July.....	1	83	94	72
"	".....	2	71	90	70
"	".....	3	80	92	64
"	".....	4	68	84	68
"	".....	5	72	84	78
"	".....	6	81	94	84
"	".....	7	85	92	80
"	".....	8	82	94	76
"	".....	9	75	98	80
"	".....	10	70	90	78
"	".....	11	76	84	74
"	".....	12	78	86	75
"	".....	13	74	88	71
"	".....	14	71	86	80
"	".....	15	77	84	77
"	".....	16	78	95	80
"	".....	17	88	95	82
"	".....	18	74	92	75
"	".....	19	74	90	76
"	".....	20	73	88	79
"	".....	21	65	78	62
"	".....	22	64	75	64
"	".....	23	68	82	74
"	".....	24	80	88	70
"	".....	25	64	92	72
"	".....	26	65	92	74
"	".....	27	62	93	74
"	".....	28	78	95	80
"	".....	29	78	98	85
"	".....	30	84	94	76
"	".....	31	80	94	78
Means.....			70	84	70
Mean for the month.....			66		

The average of the month has been high, with a sudden change on the 21st, occasioned by heavy rain at the north. On the 6th and 18th we had rain ; in some parts quite heavy, but light with us. The month closed dry and hot. Corn is doing well; the early planted is very fine, but the late is feeling the effects of the drouth. Without rain soon, the potato crop will be short. Farmers are just beginning to cut prairie hay, though they should have been through with it at this date. Thousands of acres of prairie hay will yet be cut in this county. Our last new swarm of bees came out on the 25th. On the 30th we saw them for the first at work on the buckwheat. Turnips sown the 5th came up, but those of the 15th have not appeared. The apples are doing poorly, needing rain very much. On the 30th and 31st showers went round, as usual following the streams and groves, giving us cloudy days with promise of rain, but to be bro-

ken promises. Every year adds its testimony to the value of early planted corn over that late planted. Some day we shall learn to plow for this crop in the fall and late in the summer, and to plant early.

A bad season for grape cuttings and layers of all kinds; a good year to kill weeds, break up slough land and prepare the line for willow fences. While Phoenix and others are settling the veracity of swamp vs. white willow, let every man who would like a hedge in low ground, prepare the line, say ten feet wide, and be ready to set the cuttings early in the spring.

LOCKPORT NURSERY, OF E. MOODY & SONS.—The trade list of this nursery is at hand. We observe the prices of trees have gone up. When we add to the extra price the extra freight tariff, trees for orchards will cost a trifle to the tree planter.

	1863.	1864.
Peach per m.....	\$80.....	\$200
Apple "	70.....	90
Pear "	300.....	350
Plum "	250.....	460
Cherry "	150.....	250

Rather important to those buying largely. Trees of size for retailing are much above these prices.

ROSES.—Every house must have its roses; we say must, for without roses a house is not a house.—Every farm house must then have roses; they cannot and should not be dispensed with. A climbing rose is a pretty thing in bloom, or when its foliage is half grown; but what we like most is a bomantanq or monthly rose that gives us roses from May to October;—great round roses, with beautiful, crimped petals, that laugh in the sunshine and gather the dew into pearls. Such roses please us, are hardy and require only rich, dry soil, cutting back in autumn and a slight covering for winter. By all means have them on their own roots and they will never disappoint you. Grafted roses are a fraud and a delusion, whatever may be said of them by those growing plants for sale. When these roses have stood year after year in the same place they become well rooted and send up strong shoots that greet us with abundance of roses.

Moss roses are beautiful in their season and cannot well be dispensed with.

All roses should be cut back in the autumn and have some straw or coarse manure thrown over them; and do not take it off until late in April. Some of the June roses are very beautiful, and as they are cheaply grown a few, such as George IV. Aureti, Madam Plantier, &c. should be had. If you have little time to cultivate roses, mulch the

ground heavily in the spring, and in August take it off and dig up the surface. In this way you make strong plants, and strong plants make large, fine flowers.

STATE HORTICULTURAL SOCIETY.—This Society will not hold a Fair this year. A meeting of the members will be held some time during the State Fair.

Illinois Fairs.

State Fair.....Decatur.....Sept. 12

County Fairs.

Champaign	Champaign.....	Sept. 27—30
Cass.....	Virginia.....	Aug. 30—Sept 1
Marion	Salem.....	Sept. 5—8
LaSalle.....	Ottawa.....	Sept. 6—9
Morgan	Jacksonville....	Sept. 6—9
St Clair	Belleville.....	Sept. 6—9
Union Central.....	Atlanta.....	Sept. 6—9
Lake.....	Libertyville.....	
Kankakee	Kankakee.....	Sept. 7—9
Kane	Geneva.....	Sept. 7—9
Bureau	Princeton.....	Sept. 13—15
Kendall	Bristol.....	Sept. 20—22
Hancock	Carthage	Sept. 20—23
Ford	Paxton	Sept. 21—23
McLean.....	Bloomington.....	Sept. 26—30
DuPage	Wheaton.....	Sept. 26—28
Pike.....	Pittsfield.....	Sept. 27—29
Fulton.....	Lewiston.....	Sept. 27—29
Warren	Monmouth.....	Sept. 27—29
Whiteside.....	Sterling.....	Sept. 27—30
DeKalb	DeKalb.....	Sept. 28—30
Carroll	Mt. Carroll.....	Sept. 28—30
Schuyler	Rushville.....	Sept. 28—30
Ogle.....	Oregon.....	Sept. 28—30
Cumberland	Majority Point	Sep. 29—Oct. 1
Washington	Nashville.....	Oct. 5—7
DeWitt	Clinton.....	Oct. 5—8
Macoupin	Carlinville.....	Oct. 11—14
Vermillion.....	Catlin.....	Oct. 11—14
Monroe	Waterloo.....	Oct. 12—14

Correspondence.

For the Illinois Farmer.

STERLING, WHITESIDE Co., Ill., Aug. 8, '64.

M. L. Dunlap, Esq. Dear Sir:

You ask what change in our railroad relations since the union of the N. W. with the G. & C. U. R. R.? I would say, so far as I know, they remain the same, except a greatly increased tariff. We had hoped for the permanent interest of the road, to say nothing of those which belong to Agriculture, that a more just and liberal policy would have been pursued, that this unjust and odious warehouse monopoly might have been broken up. If so it has not come to my knowledge. The farmers of Illinois, if I mistake not, will sooner or later awake to this subject and demand a law such as other States have found necessary, to protect and regulate its railroad interests, also the inter-

ests of the people in this matter of the weak against the strong. I hope it will be brought before the people on every proper occasion.

BEES.

You speak of your bees. I am glad you take an interest in trying to diffuse a knowledge for their more humane and successful treatment. It would be wrong to judge of the merits of bee-keeping by this and the previous year, (1863.) I have no recollection since my settlement in the State (1836) of two seasons following each other so disastrous and discouraging as the present and the past. The Langstroth is undoubtedly a good hive, but, after all, any well formed and chambered hive, if used with an intelligent care, cannot but succeed. Bees need protection from the sun in summer and from the cold in winter; also plenty of honey in store to carry them through the trying months of March and April. Young swarms seldom do and never should leave *clean* and *cool* hives, especially if protected from the sun. Artificial swarming I have never practised, requiring some experience and more time than I generally have had at command. Bee-keeping, to make it a success, should be carried on in a favorable locality, and with such numbers as will make it remunerative. It costs almost as much time to look after ten as one hundred swarms.

CROPS AND FRUIT PROSPECT.

The want of rain is here being seriously felt, and except it rains very soon, our staple, the corn crop, must be much shortened; and at any time subject to an early and destructive frost. The apple crop up to this time has been promising, but the drouth is now telling fearfully on the older trees, especially those not cultivated or in grass. The gradual decay not only here, but I have noticed in many of the older States, of our most reliable varieties of apples, cannot but awaken serious apprehension as to the permanency and future of our orchards.

STORING OF CORN.

I am now shelling the crib of corn noticed by you when last here. That crib of corn is not with- out, or rather has imparted some useful and practical lessons. The outside crib or bin, after being stored nearly four years, was found well preserved, except a few ears on the outside, and those might, I believe, have been saved, had bevelled boards been used instead of square edge. But I cannot say as much of the middle crib or bin. You will recollect it was eight feet wide, and surrounded on all sides by at least one foot open space, yet it inspected, "soured," retaining at the same time its fresh appearance. From this experiment I am satisfied that Indian corn can be preserved if kept dry and in the ear, provided the cribs are not too large, any reasonable length of time; an item of

experience which individuals may, but which States cannot overlook.

Very truly,

L. S. PENNINGTON.

—We have heard of numerous complaints in regard to the Galena railroad warehouse monopoly, but we trust the new management will see the matter in its true light and if they have not already corrected it, will do so at once. Doubtless the difficulty is more imaginary than real, yet railroad companies should not allow even the appearance of favoritism in regard to warehousing. The enhanced prices are what we all submit to in these inflated times. While the Dr. complains of the high freight he makes no similar allusion to the high price of corn. We think he will survive both these inflictions, especially the latter on his thirty thousand bushels of ten cent corn, even if part of it inspects *sour*.

The Dr. is right on the storage of corn. If put up dry and kept well aired it will keep sound a long time. We had saved up four years' surplus, and are now feeding and selling from the crop of 1861. This had been exposed to several rain storms after cribbing before the roof was put on, and inspects *sour*, while that of the year 1861 is perfectly sound, having been kept dry from the time of harvest.

We have before stated that Dr. P. is one of our most successful bee keepers, and from him we have had many valuable hints. Had he the Langstroth hive as now improved, we have no doubt that he would be pleased with it. To keep out the miller, it is ahead of anything that we have used. If bees are damaged by them it will be our own fault.—Last year with us was a bad one; but this year is highly favorable, considering the bad condition in which the winter left our stocks.

We have another suggestion in the good culture of the apple orchard. If we would make the apple crop profitable we must plow and mulch. Not a load of *sorgo begasse* should be left at the works, but all of it should go into the orchard and among other trees; it will pay to haul it out.—En.

Swine ! Swine !

Those wishing specimens of the breed of Swine for many years bred of the Illinois Hospital for the Insane, and now favorably known as the "Hospital Breed," can obtain choice animals at moderate prices. Apply to

E. P. JONES,

Farm Steward.

N. B.—Persons having these Swine, if they wish to effect sales, are requested to correspond as above stating time and place of purchase.

Jacksonville, Ill. June, 1864.

Aug. 1, '64

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Cider Mills.

KEY-STONE & HUTCHINSON'S CIDER MILLS

for sale by

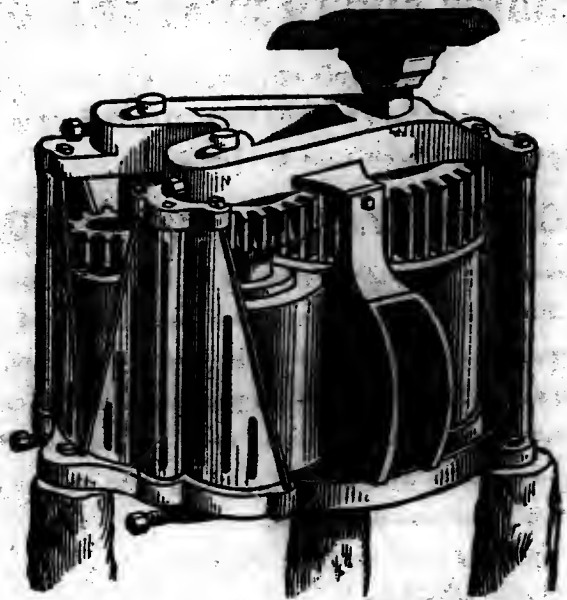
A. H. HOVEY,

194 Lake St., Chicago.

Aug 1. 1864-1t

Advertisements.

THE VICTOR CANE MILL.



CLARK SORGO MACHINE CO.

MANUFACTURERS,

122 Main St., Cincinnati, Ohio.

This mill constructed upon entirely new principles, was first presented to the Public last year, and immediately took its place at the head of all machinery in its class.

Five State Fair First Premiums!

Were awarded it in rapid succession

Over the Six Leading Mills of the Country.

The following are its distinguishing features:

Gearing Lapped, by which the Scraper is discarded and Choking rendered impossible, Diagonally Braced.—Main Roll Flanged, Feed Roll Fluted.—Shafting supported in Oil-Tight Step-Boxes,—No Keys are used.—No Cog Wheels to break.—A Perforated False Bottom in the Rear of the Rolls, to prevent Bagasse taking up the juice as it leaves the Rolls.—Mill taken apart in Five Minutes, simply by loosening Four Screws.

Six Sizes, \$60 to \$250.

SEND FOR SORGO HAND BOOK,

Sept 1. '64-1t

HOVEY'S AGRICULTURAL WAREHOUSE AND SEED STORE.

Has one of the best selected stock of implements and seeds to be found in the West.

A. H. HOVEY,

Nov 1862

No. 194, Lake st., Chicago Ill.

COOK'S SUGAR EVAPORATOR.

In consideration of the great prices of Sorgo Sirup,

COOK'S SUGAR EVAPORATOR

Should be in the hands of every Sorgo Cultivator, as he cannot afford to waste his crop by making poor Sirup upon inferior pans and kettles.

COOK'S EVAPORATOR SIRUP

Commands the highest price by 25 to 33 per cent.

The Evaporator has been tested and approved by thousands of operators, is of the best manufacture, is the only self-defecator, is the most rapid boiler, consumes the least fuel, infringes no Patent, is the only one entitled to use channels, cooling sides or motion in boiling a running stream.

It always takes the First Premiums.

Manufactured by

BLYMER, BATES & DAY,

Mansfield, Ohio.

Sept-64-1t

Also—The "VICTOR CANE MILL" at manufacturers' prices—the best ever brought before the public. Sorgo Hand Book sent free,

CENTRAL NURSERIES,

YORK, PENN.

Edward J. Evans & Co. respectfully invite attention to their superior stock of

EXTRA SEEDS AND PLANTS.

Grown with especial reference to the demand from amateurs and planters for *their own* planting.

Their stock embraces all the leading varieties of

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Flowering Shrubs and Vines, Roses, Small Fruits, including a very choice lot of

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PATENT CLIMAX ADJUSTABLE

SUGAR CANE MILLS.

MANUFACTURED BY

E. W. Skinner & Co., Madison, Wis.

This mill has been before the public for the last four years, and has invariably given the best of satisfaction. The lever principle is a new and distinct feature in this Mill, and secures a constant, unvarying pressure, and expresses the juice much dryer and with less power than any other mill. Our adjustable principle is no make-shift, but is real and is all that is claimed for it. We have a pamphlet containing a full description of our various sized mills, with testimonials therefor, also a treatise on the Cultivation of Sorghum, and the manufacture of Sugar and Sirup therefrom, which we send free to any one requesting it.

This Mill took the

First Premium at the Illinois State Fair

Last Fall, after a thorough and rigid trial. It receives commendation from the press everywhere.

The reporter for the Chicago Tribune, from the Sorghum Convention, held in Madison, Wis., on the 3d, 4th and 5th of February, in speaking of the mills on exhibition, remarks:

"The Climax Mill of Skinner's Patent seemed to have the most friends, and warm approbation was expressed by all present who had used it the past season. Your readers will remember that this mill took the first premium at the Illinois State Fair at Decatur, last season, and it is the only one we are acquainted with that adjusts its pressure by lever and weights, instead of by set screws."

The reporter for the Chicago Times says:

"There were several other mills on exhibition, but none that possessed the same adaptability for work."

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Price of above Mill.....\$120 00
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Sept 1 '64-2mo*

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Having associated with me in business my sons, (William and Charles S. Brown,) I will sell at public auction, at my residence, Grove Park, in Island Grove, Sangamon county Illinois, three miles west of Berlin, on the road leading from Springfield to Jacksonville, on Wednesday and Thursday, August 24th and 25th, 1864, (sale to commence at ten o'clock,)

Thirty or Forty Superior Short Horn Cattle, consisting of Cows, Heifers and Young Bulls; also South-Down Sheep and Berkshire Hogs, from the importation of the Illinois Importing Association of 1857; also a number of valuable

BROOD MARES COLTS AND FILLIES,
of trotting stock.

Catalogues of Stock will be issued in due time.—Persons desirous of obtaining them can do so by addressing me at Berlin, Illinois.

Aug-'64-1t

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The Old Rochester Nurseries.

SAMUEL MOULSTON,

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OFFICE, 50 FRONT ST.,

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Keeps constantly on hand a large collection of

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BULBS AND PLANTS,

Such as

Dahlias, Tulips, Japan Lillies, Hyacinths, and all the varieties of Chinese Peonies,

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Gen'l Ag't for Illinois, Indiana and Ohio.

DWARF AND STANDARD PEARS,

Bearing Trees,

OF LARGE SIZE AND DOUBLE WORKED.

These Trees are very suitable for aged planters, to whom immediate fruiting is of consequence.

NATIVE AND FOREIGN GRAPES.

Concord, Delaware, Diana, Rebecca, Hartford Prolific, Bland's Virg., Catawba, Chasselas Blanc, Traminer.

Special Notices.

AGENTS.—We do not appoint any agents—all are voluntary. Any person so disposed, can act as agent in any place.

ENLARGE YOUR CLUB.—Will not the friends of the ILLINOIS FARMER inquire how many copies of the FARMER are taken in their respective offices, and pass around among those who ought to have their names added to the list? Our terms are so low to clubs of ten and twenty that we ought to have one or the other made up at every office in the State, and at every office in Central Illinois, one of twenty or more. Will our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?

TO SINGLE SUBSCRIBERS.—You receive the only copy of the FARMER that goes to your post office. Can you not send one, two, three or more new subscribers, without any trouble? Try. Sample numbers, etc., sent free.

DRAFTS.—Those remitting us large amounts of money, will please send us drafts on Springfield or Chicago, less they exchange. If you send cash in a letter, be sure that it is well sealed and well directed, to Baker & Phillips, Springfield, Illinois.

THE FARMER AS A PRESENT.—Any of our subscribers who wish to make a present of the ILLINOIS FARMER for 1863, can have it at the lowest club rates, when out of the State. For fifty cents you can treat your Eastern friends to a Western Agricultural Paper. In no way can you invest that amount to so good advantage to emigration.

SEND NOW.—Any person who remits pay for a club of ten or fifteen, or any other number at the specified rates for such clubs, can afterwards add to the clubs, and take advantage of the reduction. Thus a person sending us five subscribers and three dollars, can afterwards send us three dollars more and receive six copies.

TO THE CASUAL READER.—This and other numbers of the ILLINOIS FARMER will be sent to many persons who now use it for the first time. Will they not examine it, and if they like it, subscribe for it, and ask their neighbors to subscribe? Sample numbers, prospectuses, etc., sent free to all applicants. See terms elsewhere.


HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighborhood, can easily make up a club of five, ten or twenty, but no time should be lost in doing so, for your neighbors may send east for their


paper which, though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us Western farming.


HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage:


1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it.
2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them.
3. Get post masters interested. They see everybody, and are efficient workers.
4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers.
5. Begin now, before the agents of Eastern papers get up their clubs.

This last hint is especially important. Let us hear from you soon. See terms elsewhere.

 Clubs may be composed of persons in all parts of the United States. It will be the same to the publishers if they send papers to one or a hundred post offices. Additions made at any time at club rates. We mail by printed slips, which are so cheaply placed on the papers, that it matters little whether they go to one or a dozen offices.

 Correspondents will please be particular to give the name of the post office, county and State.

 Specimen numbers will be sent gratis, upon application.

 Address

BAKER & PHILLIPS,
Springfield, Illinois.

SPECIAL NOTICE.—For terms see prospectus on last page. All exchanges and communications for the eye of the editor should be directed to ILLINOIS FARMER, Champaign, Illinois. Electrotypes and business matters, and subscriptions, to the publishers, Springfield, Illinois. Implements and models for examination should be sent to the editor. The editor will, so far as it can be done personally, test and examine all new machines and improvements submitted to his inspection. He will be found at home, on his farm, nearly all of the time. So far as it is possible, the conductors on the Illinois Central Railroad will let off passengers at his place, which is directly on the road, three and a half miles south of the Urban Station, now the city of Champaign.

EVERGREEN SEEDLINGS.

A very large stock of superior grown Evergreen Seedlings, at less than one-half the Eastern Prices.
PER 1,000.

NORWAY SPRUCE, two years old,
three to five inches, \$5,00

NORWAY SPRUCE, three years
old, six to nine inches, \$8,00

SCOTCH PINE, two years old,
three to five inches, \$7,00

AUSTRIAN PINE, two years old, \$2 per 100.

BALSAM FIR, RED CEDAR, ARBARKVITÆ, &c., &c.,
of large or small size, at very low rates.

A large stock of CONCORD GRAPES, one of the
best varieties for the West.

A large stock of RED DUTCH CURRANTS, the
best for market, two to three years old, at half the
usual rates.

STANDARD AND DWARF PEARS, of well
tested varieties, together with a good assortment of
Fruit and Ornamental Trees, &c., &c.

Send for Catalogue. ROBT. DOUGLAS.
WAUKEGAN, ILL. tf

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The subscriber has a large stock of the most vigorous growth layers of the following desirable varieties, which he will sell at very low rates, to wit:

CONCORD. \$55 per 1,000.

A few thousand of bearing age, of large size at
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These will produce a good crop the second year.

HARTFORD PROLIFIC, \$10 per 1,00, or
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The above will be well packed,
to go any distance.

TERMS—Cash, or approved bank paper of
short date.

JAMES SMITH.

DES MOINES IOWA, Jan. 1, 1863.

Dunlap's Nursery.

This nursery has good stock of apple trees of all ages and of choice varieties for the west, low heads and stocky. The genuine "May Cherry," (Kentish or Early Richmond of Downing,) Dwarf and Standard Pears, the Purple Cape Raspberry, the best of all raspberries for the farm; Houghton Gooseberry, Grapes, Strawberries, Ornamental Trees and Plants. An immense stock of Silver Leaf Maple, from \$5 to \$15 per 100, 6 to 10 feet high. The green house is well stocked with roses and other bedding out plants. This stock is grown to retail and not adopted to the tree peddler, as all trees and plants are large, stocky and thrifty, and intended for the planter only. Terms cash with low prices.

Address, M. L. DUNLAP,
Champaign.

March 1, 1863. tf

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(Successors to G. S. Thompson.)

CAPITAL PENSION & BOUNTY AGENCY.

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DUE RESIGNED OFFICERS,

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If you have any claims of any description against the government, give us a statement of the facts, and we will tell you what your rights are in the case. A letter of inquiry may save you much trouble, expense and perhaps loss. All communications enclosing a stamp for return postage promptly answered. Information gratis. No fees charged until money is collected. Charges low. Pensions for \$5, as regulated by act of Congress. Address

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MANUFACTURERS OF

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Send for a priced Catalogue.

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April-64-ly*

The Illinois Farmer,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE.

PUBLISHED AT

SPRINGFIELD, - - ILLINOIS,

BY

BAKER & PHILLIPS,

AND IS EDITED BY

M. L. DUNLAP, Tribune's Rural.

TERMS IN ADVANCE.—\$1 a year; two copies 1 50; five copies \$3; ten copies \$6, and one to getter up of the club twenty copies \$10.

It is not necessary that the club should all be at one office—we send wherever the members of the club may reside.

The postage on the FARMER is only three cents a year in the State of Illinois, and six cents out of it.

Specimens numbers sent free on application.

Subscription money may be sent at the risk of the publisher.

Exchanges and communications for the eye of the Editor should be addressed, ILLINOIS FARMER, Champaign, Illinois.

All business letters are to be directed to the publishers, Springfield.

TERMS OF ADVERTISING:

	1 mo.	3 mo.	6 mo.	12 mo.
One page, or two columns.....	\$12	\$30	\$52 50	\$75
Half a page or one ".....	7 50	18	30	45
One fourth page or half column..	4 50	10 50	18	27
One eighth or one fourth ".....	3	6	10 50	15
One square of ten lines.....	1 50	3	6	10 50
Card of five lines one year.....				\$8 00

Fifteen cents a line for less than a square each insertion.

All worthy objects advertised, and those of importance to the Farmer will receive, from time to time, such editorial notices as the Editor may consider them worthy of, without additional charge.

Implements and seeds to be tested should be sent direct to the Editor, at his residence, Champaign.

We have put the price of advertising within reach of all. It will enable those who like to freely advertise their goods, to do so at a cheap rate,

Terms, cash. Yearly advertisers will pay semi-annually, and all transient advertisements must be accompanied with the cash to insure insertion.

BAKER & PHILLIPS, Publishers.
Springfield, Ills.

THE ILLINOIS STATE JOURNAL

IS CONFIDENTLY OFFERED TO THE PEOPLE OF Illinois as the best and most reliable news, political and commercial paper within their reach. It is published at Springfield, the Capital of the State, and is the medium of all official notices, published by State authority. Particular attention is given to commercial affairs and every number contains copious reviews of the markets in the principal cities.

TERMS:

One copy one year.....	\$2 00
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First Premium for Family Machine.
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INDIANA STATE FAIR.

First Premium for Machine for All Purposes.
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First Premium for Machine for All Purposes.
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First Premium for Machine for All Purposes.
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The GROVER & BAKER S. M. Co. are the only parties who manufacture and sell Machines which both SEW PERFECTLY and EMBROIDER PERFECTLY.

GROVER & BAKER S. M. COMPANY,

115 Lake Street, Chicago.

Jan 18-64-ly



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STANDARD
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OF ALL KINDS.

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FAIRBANKS, GREENLEAF & CO.
172 LAKE STREET, CHICAGO,

Sold in Springfield by

E. B. PEASE,
1 Mel-ly

Be careful and buy only the genuine.

THE ILLINOIS FARMER.

VOL. IX.

SPRINGFIELD, ILL., OCTOBER, 1864.

NO. 10.

The Illinois Farmer,

DEVOTED TO THE

FARM, THE ORCHARD AND THE GARDEN,


PUBLISHED BY

BAKER & PHILLIPS,

SPRINGFIELD, - - - - - ILLINOIS.

M. L. DUNLAP, Editor.

All business letters should be addressed to the publishers.

 EXCHANGES and all matters pertaining to the editorial department, must be directed to ILLINOIS FARMER, Champaign, Ill., as the editor resides at that point, and is seldom at the office of publication, from which he is distant over eighty miles.

* * For terms see prospectus and special notices in advertising department.

October.

Soft and haze-like is the air of October, breathing ripeness to the vegetable world. The early frost is loosening the leafy garniture of the forest, and the disrobing for winter is everywhere in active progress. Cool nights and pleasant days hath October. The apples are falling in the orchard, and the nuts dropping from the trees of the forest. The golden ears of corn peer out from beneath the ripening husk, and the team is turning the long furrows in the stubble field. Gentle reader, did you ever use a weed hook as you plow, with which to turn under the tall weeds which like Jonah's gourd have

sprung up in the stubble? If you have not make no delay to get one made; you will then have a clean furrow, instead of one fringed with the tip ends of a row of green weeds, that will ripen their seeds to be spread on the surface, ready to grow after the first April shower.

Make no delay in digging your potatoes, if not done before frost. We like best to attend to this work during the last half of September. The time to sort your potatoes is at the digging; you can then select the large, fine ones for table use, and also separate the kinds. This latter is of no small importance, as two kinds should not be planted together, unless you wish a large share of small potatoes; for the strongest grower takes the lead and the weaker one turns out only small tubers.

Market your products as fast as possible, if the price will warrant—be satisfied with fair prices—the man who always waits to get the highest price, often takes up with a low one. Remember the old maid who took up with the crooked stick on the hither side of the grove of straight poplars.

Remember that brains are an essential element of successful farming, and see that they are used. It is not the farmer who does the most hard work who makes the most money.

Fall plowing should be prosecuted this month; every foot of land tha

needs plowing for spring crops should be turned over in the fall.

Now is the time to set out orchards. Do not put the work off until spring. Last fall we intended to have set out a small orchard, but was somewhat busy and put it over until spring; but when spring came we were more busy and it was not done, and the result is, a year lost. We shall endeavor to be more prompt this time, although labor is high and difficult to be had. The lot contains forty acres, and at twenty feet, the distance that they will be set, will require 4,320 trees. These will be set out, banked up, thinned out and all the new wood cut back to within three or four buds of the last year's growth.—Trees six years old, and many of them one to two inches in diameter, will be used. Peddlers' whips are not our forte for an orchard.

The heavy rains of the last of August have made the fall pasturage good, but if you have a spot in your pasturage not well set in grass, plow it up, sow to rye and during the winter seed with timothy and clover; this will give you early spring pasturage, especially the rye.

October is the month of active farm duties: the autumn harvest and the time of preparation for spring work.—The buckwheat, potatoes, and the immense crops of corn, are ready for gathering. Apples must be picked and the cider made; but the mild, genial days, long evenings and cool nights brave one for the tasks before him.

Hogs should be full feed now, while the weather is warm, as they lay on flesh rapidly at this season; and the beef cow should have an extra feed of small potatoes, pumpkins and corn.

Should Farmers Insure?

We had supposed this question disposed of in the affirmative, but regret to learn that there is a large majority of our farm buildings uninsured. The failure of so many bogus mutual companies have tended to discourage insurance among this class of persons.

Our readers know our dislike to peddlers, and insurance peddlers may be ranked among them. Let us see how the thing is done. Half a dozen nice young men, or may be part of them old men, desire some easy way of making a living or of retrieving their fortunes. A mutual farmers' insurance company is started under some general law, old charter or no charter at all; an office is hired, blanks and circulars printed; A. is President, B. is Secretary, and a dozen respectable citizens, in the benevolence of their hearts, allow their names to be used as directors. Now all is ready, when C., D., E., F. and G., thus dominant members of the firm, start out on a tour of canvassing; the farmers are besieged and offered insurance at rates so astonishingly low that they cannot resist the *risk*. If they have no money, notes are taken, payable in three or six months;—as the company have ample funds (?) there is no need of ready money. Things thus go on in a quiet way; but fires will occur, and the new company have a loss. This is just what they wanted. It is promptly paid; not a day is allowed to pass by before the lucky farmer has his money and the company have his certificate of the fact, setting forth the immaculate company. Every local paper publishes the card in *leads*, and the new insurance company has obtained its majority; it has *been under fire* and come out unscathed. The business goes on swim-

ingly. The officers begin to cut a dash, speculate in town lots, keep fine turn-outs. C., D., E., F. and G., have retired from the canvass and traveling agents substituted. The risks are extended first to isolated village houses, next to blocks of tumbled down wood buildings, mills—any and everything.

* * * A windy night the fire got too much headway, and—the whole institution collapsed.

We once held a policy of \$1400 in that same institution or one of its class. It taught us a lesson, and since then we have nothing to do with peddling insurance agents. We now insure in both stock and mutual companies; but we must know not only the standing of the office, but the mode of doing business. Responsible men do not take risks below what is considered safe, and which will allow of the employment of responsible business men for local agents. In our State there is now several insurance companies well worthy the patronage of our people, and to them the preference should be given. We are pleased to see that a large number of our solid men are investing their spare funds in this direction, and it will not be long before our own capitalists will take all risks required, and thus save our money at home. It is now time that the West stood upon their own resources in this respect.

Chicago, Peoria, Alton and Freeport have each their well established insurance companies; but Springfield has heretofore done little in that direction, and the farmers of Central Illinois have taken their chance among the good, the bad and the sham, about two to one against them, but now we can congratulate our farmers on a change for the better. The Sangamon Insurance Co.

has swung into line and will fill up the gap so long open to adventurers. Uncle Jesse, (Hon. J. K. Dubois), the President, O. M. Hatch, Secretary of State, Vice President, and Geo. Boynton, Secretary. Here is a happy combination of solid capital, sterling business tact and persevering industry.—That the new institution will win its way to the confidence of the community, no one knowing the men having its control, will for a moment doubt. Success to this and all similar home enterprises.

Miscellaneous.

From the Chicago Tribune.

A Chapter on the Raspberry.

CHAMPAIGN, Ill., July 20, 1864.

Among the small fruits, the raspberry is becoming very popular, and by many persons is considered in all respects equal in value to the strawberry.

This fruit has a positive and fixed position in the succession of the summer fruits, with a growing popularity second to no other. It is not a rival to the strawberry, as it follows it in the progress of the season, and thus has an independent standing of its own beyond the reach of any rival, and flanked by the gooseberry and currant. The blackberry comes next in order, and this in turn is followed by the grape.

Sailors reckon the day of the week not as we do, but by the material for dinner which is varied throughout the week but occur the same on each succeeding week day. We might reckon the different weeks of spring and summer in the same way. First, we have the cowslip from the woodland slough, drenched in vinegar, a dainty that pleases the appetite that now craves a mixture of the bitter with the acid. Greens of all kinds are sought for until we become almost herbivorous.

First of the summer fruits comes the strawberry, whose sharp acid mingled with sugar pleases the taste of all, and appears to divest us of the malaria that lazy winter had gathered in the system. Next comes the era of the raspberry, the blackberry and the season is closed with the grape. Each of these in turn becomes the center around which the lesser fruits revolve, and though numerous, hold but the position of aid-de-camps to the commanding generals of the season.

At this time of political strife we should hold this raspberry in high esteem, inasmuch that it is an American, or at least the only variety that is of any value. The European varieties will not stand our winter, and though highly aristocratic, and prized in refined society, is of no value to the republican masses of the country, who prefer an

abundant supply of good food to an occasional taste of a rare dainty.

Nature has wisely graduated our taste to the fruits sent us in their season, and we cannot say that the strawberry or the raspberry is the most delicious, for both of them are only so in their respective seasons. While the strawberry acts as an alternative on the system, the raspberry furnishes the solid food to enable one to stand the wear and tear of hard summer toil. It enables us to dispense with pork and greasy dishes or demoralizes the appetite for cake, preserves and other hurtful dainties with which our tables are too often loaded.

Every owner of a city or village lot can grow raspberries simply by training them against the fence or wall, if they can have the sun for a part of the day, all right, they will have good crops—that is if you have the right kind.

THE BLACK CAP.

The American Black Cap stands the king among the raspberry tribe. It is by no means the most delicate berry, but its adaptability to all soils, its hardiness throughout the temperate zone, its profuse annual crops, its solidity, enabling it to stand carriage and its long keeping quality all combine to render it the raspberry of commerce; whether in its ripe state or dried. An ordinary crop of this variety may be set down at fifty bushels to the acre.

Perhaps it would be well to figure up the cost and profits of an acre. The Doolittle Black Cap is only a selected variety from the woodland. I have numerous plants from the woodland, in all respects equal to the Doolittle, though I prefer to plant the latter, for the simple reason that they will average larger and better than those taken indiscriminately from the woodland. But those who have not the money to spare for the plants should go to the groves for them. The usual prices at the nurseries are for *tips*—which never buy if you can get one year old plants at four dollars per hundred when *tips* are offered you at half that price. The land should be either trenched plowed or sub-soiled a foot deep; set the plants in rows eight feet apart, and four feet in the row, which will require about 1200 plants to the acre. If you get those from the woodland, the outlay will be two or three days' labor; if at the nursery, about \$30 for the Doolittle. When taken from either the woodland or nursery, they must be cut back to within six inches of the ground. This will enable them to throw up strong canes for the next year's crop. They will produce a few berries the first season, a moderate crop the second, and a good one for market the third. The first year the intervening space in the rows can be used for cabbage or beans. In March the canes are *cut back* about one-third their length, and will need no staking or tying up. The third season the canes should be shortened back in July and August. This will make them more stocky and give larger fruit. This variety does not sucker, only sending up canes from the old stalks and new ones from the *tips* or ends of the canes which bend over and take root. These take root late in the autumn, and the following spring furnish plants called *tips*, but it is much better to let them grow one season before transplanting, unless they are to be removed a short distance.

The ground for new plantations should be prepared in the autumn, so as to set the plant the last

of March or the fore part of April, as late setting is not advisable. Cultivate early in the season with cultivator, and then again after the picking season. At this point this commences about the 25th of June, and lasts about three weeks, though the season of marketing will not much exceed two weeks. A good hand will pick 30 qts. a day, tho' the average of boys, girls and women may be set down at 20 qts.

A bushel of berries are reckoned at 32 qts; this at four cents a quart makes the picking of a bushel amount to the sum of.....\$1 20
Express freight, say..... 60
Commission at 10 per cent..... 60

\$2 50

Allowing them to be sold at \$6 the bushel, the grower has for the use of his land, superintendence and use of drawers for shipping, the nice little sum of \$3½ a bushel, or on a yield of fifty bushels to the acre, \$175. Who will not say that the raspberry of our woodland transferred to the field will not pay equal to the best of farm crops.

Berries are shipped in drawers of half a bushel each, three of which form a case. They hold 16 qts, Dry measure, but when retailed by the Wine quart, hold out at least eighteen quarts.

THE PURPLE CANE.

This is a variety of the Black Cap, with the same habit, and requires the same treatment. It has a more vigorous growth, and bears larger crops, but the fruit is too soft to send a long distance to market, and in hot weather will sour within 24 hours after picking. The fruit is very rich, and to most tastes preferred to the Black Cap.—For jam it is the most desirable; it also makes a valuable wine for invalids. It is the farmer's berry and should be in every garden in the country. Its season is four to five weeks. It begins to ripen with the Black Cap.

HUDSON RIVER ANTWERP.

Which freezes down, while the

LAKE SUPERIOR,

So valuable for jam in its native wilds, is but a poor bearer here.

Among the English sorts, none have stood the test as compared with the first named sorts.

BRINKLE'S ORANGE,

The most delicious, perhaps of all raspberries, can only be grown when covered during winter, and will cost at least a dollar a quart. The same is the case with the

MERVILLE DE QUATRE SEASONS

With which our city and village gardens have been regaled at 50 cents a plant.

THE YELLOW CAP.

This is similar to the Black Cap in habit, but is said to be a poor bearer. I have never fruited it.

THE CATAWISSA.

This is another variety of the Black Cap, said to be productive, bearing all the season.

The shoots mostly lie on the ground, and the fruit becomes dirty. The berries are large, of a purple color, and in taste resembles the Purple Cane. As a market berry, I think it has little value, being worth more to the nurseryman at \$3 a

dozen plants, than to the fruit grower. To those desiring a late crop, this and the

OHIO EVERBEARING

are the most valuable.

But few if any of the English or red raspberries can compete in the market with the American cap berries. The whole tribe of these sucker so badly that they are difficult to cultivate, and besides most of them need protection in winter.

THE ALLEN RASPBERRY.

After six years' trial with this it is set aside as worthless.

There is no more danger of over doing the raspberry than the strawberry, for thus far the demand is in advance of the supply. When the market began to be supplied with the strawberry the price was from four to eight cents a quart; now that it is grown by the thousand acres, the price rules from eight to ten dollars a bushel. Raspberries that used to go begging in the tin pails of country boys and girls at six cents a quart, now that they are grown by the hundred acres readily sell at eight dollars a bushel at wholesale.

It might be curious to count up the daily supply for Chicago alone. Suppose its 160,000 inhabitants to be divided into families of six each; this would make about 27,000. Each family will easily consume four quarts a day, or a daily aggregate of 3,375 bushels, or the product of $67\frac{1}{2}$ acres producing 50 bushels each. Now add to this a bushel to each family for jam and canning, and we need the product of 550 acres. Multiply the daily consumption by fifteen, the raspberry season, and we have a total of 1,550 acres required for this fruit alone. There is little danger of an over supply, and farmers and market gardeners may govern themselves accordingly.

RURAL.

PEACH TREES AND TANZY.—D. M. Fisher, Arch Spring, Blair Co., Pa., disputes the position of Mr. Kohler, of Missouri, about tanzey being a preventive of borers and curl-leaf in peach trees. Mr. F. says:

"I would say that I have tried the remedy thoroughly, and in no case has it proved to be a preventive of either. I have peach trees standing among the tanzey dead and dry. I examine my trees annually, and sometimes oftener, and have always found the borers as plenty where the trees were surrounded by tanzey as anywhere else, and the curled leaf is just found the same as elsewhere."

This gives both sides of the question. Mr. K. thinks tanzey useful. Dr. Trimble thought the idea ridiculous, and Mr. Fisher says that he has fully satisfied himself by actual trial.—*N. Y. Tribune.*

LICE ON CATTLE.—The cheapest, best and easiest method to kill lice on cattle as follows: Take half a wood pail of potatoes, boil them thoroughly in water for about three hours, strain out the potatoes, and wash the animal thoroughly with the liquor. One application is generally sufficient to send every louse on the beast "over Jordan." I have tried it and know it to be effectual, and that nothing dangerous to the animal can follow the application.—D. R. P. in *Rural American.*

Birds and Insects.

There are various insects that always threaten the destruction of fruit and fruit trees; and they seem to be increasing. They already render very uncertain many kinds of fruit. How shall they be kept at bay? We will answer. Their natural enemy is birds. Insects are food of birds. They are on every tree, shrub, plant, in every pool, swamp and soil. Everywhere they come into being in teeming millions. Many of them attack the fruit for food, or for nests, for their larvæ. The means to prevent their doing evil is the birds. We should therefore encourage them to grow and multiply in all our fields and orchards. We should not alarm or destroy them. We should consider them the naturally commissioned sentinels of our fruit trees. We should regard them as natural ornaments and conservators of our orchards and gardens. We should feel that birds are a standing army—on picket duty—self-marshaled and trained to meet and overpower the invading army of the insect world. The wanton or intentional destruction of a bird should be considered a public loss—a misdemeanor—and should be held an outrage on Divine order and human instinct. God provides a balance between insects and the feathered tribe; but man, in his cruelty and impiety destroys the balance; and the insects creep upon his fruit to pay him for it. It is only after civilization has destroyed the birds of a country that insects overrun it. The birds live upon insects. All agriculturists, gardeners, fruit-growers, philanthropists,—all good people should discountenance the destruction of birds and encourage their multiplication by the very kindest treatment. It should become the settled conviction of every community, that birds, by holding in check the insect scourges, are public benefactors. So greatly has the stock of birds been reduced, that cultivators are beginning to be alarmed, and in some of the States have already secured legislative protection, ours among the number.

There is reason to believe, that, although most birds live on a variety of food, yet each particular species of birds has a greater partiality or fondness for some particular kind of insects or reptiles.

Many species of birds follow civilization. The same may be said of several species of insects; or, at least, they multiply under its influence. Hence the necessity of birds following, in order to reduce the number of insects. No man can study "Nature's works and ways" without becoming a wiser and a better man. Let us then study and observe.

Incredible, is it not, that the birds should need an advocate, that these bright and beautiful denizens of our gardens, our lawns, and our groves should fear harm at the hand of man—that his eye and ear should be so dull as to find no charms in their untaught melodies, in their forms of perfect grace? Yet not more strange than sadly true is it, that boys, and "children of a larger growth," can delight in the destruction of these harmless creatures. One could not believe it, did not every day witness these noble bipeds sallying forth, armed with deadly weapons, and on "murderous thoughts intent." And at night returning with a dozen robins, a few sparrows, and a blue-jay or king-fisher—proud trophies of a well spent day! "Well, and why not? *it is such sport!*" says a lad near by. I will tell you, my boy: These little

birds were not made in vain, not merely to furnish "sport" for the idle. The Creator formed them for an important use; if you destroy them you frustrate his plan, and nature always suffers when the laws and plans of God are destroyed. You have probably heard your elders speak of the great increase of the various tribes of voracious insects, and that the fruits are not so fine and fair as of old; but knotty and worm-eaten. Yet we suppose that you nor they either ever dreamed that the destruction of the birds had anything to do with the case. You would realize it, could we tell you how many bugs and worms and flies were frequently found in the crop of a single bird. We cannot tell you the number, but have been astonished at the amount as certified by creditable witnesses.—Farmers and gardeners are beginning to find out the birds to be the most useful allies. Nothing in the insect tribe comes amiss to their dainty-looking bills, from the aphides upon the rosebush, to hideous caterpillars. And if they sometimes treat themselves to a ripe cherry or a tempting strawberry, who can blame them if after such a dinner, they fancy a little fruit for a desert—and how do you know but their quick eye perceived a worm in the very cherry you grudge them? "The laborer is worthy his hire"—and man can well afford this small compensation for their tireless industry.—*Horticulturist*.

RURAL REFINEMENTS.—Our people have yet to learn what value there is in a well kept flower garden. Does it not supply to children their most beautiful memories? A child who has nothing but a dirty house and neglected grounds to recollect, as connected with his early home, lacks an important impulse to a well ordered life. Beauty in morals can hardly be expected from deformity in condition. And not only to childhood do flowers minister happy influences, but also to the labors and fatigues of manhood and old age. Is not the farmer who returns from the labors of the field to repose in a well kept house, in the midst of green lawns and beautiful flowers, a happier and better man for their presence? Does not old age find them an added element of its repose? It were useless to ask, "What good comes of flowers? Can we eat, drink or wear them? How can I spare the time to cultivate them, when the necessities of life demand so much of my attention? Just as if ministering to our love of the beautiful is less of a necessity than eating, drinking and wearing.—Virtue and happiness depend as much upon neatness, order and beauty, as animal life upon eating, drinking and sleeping. No class is so unpardonable in neglecting to beautify their homes as the farmers, who live where the means of doing it may be had with so little care and cost.—*Chronicle*.

LICE ON CATTLE.—**MR. MINER:**—I see in your paper a recommendation from your correspondent, of soft soap for lousy cattle. It will cure if you put on enough to take all the hair off. A much better remedy is to give cattle sulphur, say a teaspoonful in salt three times a week, for two or three weeks, a tablespoonful for large cattle, the only effectual remedy. If cows are lousy put a spoonful in the calves' milk when you feed them, three or four times a week; if this fails, there is no cure. Try it.—**A. RICHMOND**, in *Rural American*.

Pleasant Surprises.

The sunshine that sometimes quietly takes a seat in your room in mid winter.

A forest brook in August, so full that the season has no effect upon it—and so clear it seems but another air to show you the pebbles and the smooth bottom.

A green field in March west of you, with the afternoon sun upon it.

An eye that reminds you of a precious stone.—But better—an eye that itself is precious.

A bird pelted by the storm, but singing after it. The sight of even an indifferent friend when you are homesick among strangers.

The pleasure of a dog when it meets an old friend. The affection of a dog at any rate, reminding you so much of human affection.

The word of affection dropped accidentally by the pen of your sweetheart.

The sight of a child not your own, which you love.

An eagle.

An angel (in human form) that yet does not know it is an angel.

A man just out of trouble that did not hurt him. Forgetting your own meal when you are eating a better at something else.

To see a poor, miserable man made happy.

To do a really meritorious act, when your heart is in it.

To save a maiden from disgrace.

To go to bed with a good conscience—(old, but worthy to be repeated.)

To look upon death as another new field of enjoyment—showing your life is right, and your view of death the same.

To see an aged wayfarer shed tears at the receipt of needed alms.

Stars on a dark background of night, seen from the city street.

The first breath of a buckwheat field, ere the field is seen.

The idea that the simplest of flowers (small Celandine) "heralds in the whole troop of flowers."

Your first sunset in Italy.

The first bumble-bee of the season—telling you of summer days.

The pine tree looking over the other trees to the sea, and responding with its melody. (Lowell's thought.)

The sudden face of a friend when you expected a bore.

The thought that there are many "pleasant surprises" yet in store.

TO KEEP FLIES FROM WORKING CATTLE.—Take a piece of scantling 3x4 inches, and a few inches longer than the yoke. Through this bore four holes to correspond with the bow holes in the yoke. Have bows long enough to extend five inches above the yoke, letting the bows come through the holes. Bore several small holes in the sides of the above piece, and fasten in a brush long enough to reach the oxen's hips. The brush should be of some tough wood with the leaves on. When it is worn out put in more. Some use blankets for their cattle while working, but it makes them unnecessarily warm, and costs something at present prices. The motion of the oxen while walking will keep the brush waving about enough to keep the flies off.

From the Country Gentleman and Cultivator.

Importance of Knobs on Horns.

Horns, either on neat cattle or sheep, are a nuisance; and they are just as necessary for horses and swine, as they are for any of our domestic animals. Horns are a weapon that our domestic animals do not need, and therefore, as they are often the cause of no little damage, it is very important that large knobs should be fastened on their sharp ends. These little metallic knobs, which are screwed on the horns, are not worth half the time and expense which they cost to put them on.

When I was accustomed to keep neat cattle, the horns of every one of them, after they were two years old, were knobbed with large wooden knobs as large as a man's fist. By this means my cattle would feed at the racks almost as close together as sheep are in the habit of feeding. It was impossible for one to hurt another with such knobs on the ends of their horns. But when the horns were not knobbed, one ill-natured cow or a pugnacious bullock, would often set up a general hooking throughout the yard, when some of the feeble ones would be seriously injured in the commotion. Many a valuable cow has been ruined because the ugly, sharp pointed horns of some pugnacious associate were not knobbed.

I have always found that if animals get a hooking it exasperates them, and they will vent their spite on some one that they can hook, and so every one gets a severe hooking, except the one that struck or hooked "fust." But let these ugly horns be knobbed, and these ill-natured, hooking dispositions will be softened down like the dispositions of sheep.

THE WAY TO MAKE KNOBS.—Procure a few billets of hard tough wood, and have them turned in the shape of an egg, with the small end cut off square. Almost any turner will turn out a lot of them for half a cent each. They should be not less than three inches in diameter. I always made them four inches in diameter for my cattle. Apple wood or yellow locust will make good ones, by selecting such pieces as will not split easily. Now bore a half inch hole through each one, lengthways of the wood; and then bore out the small end a little with a borer, that may be obtained at the hardware store, which will make a tapering hole to fit the end of the horns. Bore another hole with a nail-bit or gimlet, through the knobs in a transverse direction, for the purpose of fastening them to the horns. Now put them in some vessel containing linseed oil, and let them become well saturated with oil. This will prevent their checking in the sun, and keep them from shrinking and getting loose. My practice was to make a lot of them at one time, so that they would always be ready for use.

THE WAY TO PUT THEM ON THE HORNS.—If an animal will not stand still without tying, fasten his head firmly to a low post or to a piece of timber, which is fastened in a horizontal position to two posts, which will be much more convenient than a post.

Fit the knobs to the horns by whittling with a sharp knife either the horns or the knobs, or both of them. When the knob fits well, thrust in a nail gimlet, and mark the horn on both sides. Then bore the hole both ways, and *draw-bore* the holes a little.

For fastening on the knobs pieces of wire are much better than nails. Procure some wire of the size of the gimlet and cut off pieces not quite long enough to reach through the knobs. Grind or file one end to a point so that it will follow the hole well. Put on a knob just as it was marked, and let one man hold a heavy piece of iron or stone on one side of the knob while the wire pin is driven in. Let the pins be driven in by smart blows, instead of little raps, as pounding on the horns is very much like pounding on the forehead, and some cattle are very sensitive about blows about the head. But by holding a heavy weight opposite the hammer, they will feel but little of the concussion.

Here is another very important consideration about boring the horns. In the horns of young animals the quick or live pith extends to within a half inch or so of the tips. Therefore the pin holes must be bored very near the small ends, or the gimlet will enter the quick. In the horns of older animals pin holes may be bored two or more inches, if necessary, from the tips, without touching the quick.

When neat cattle are allowed to run in the same enclosure with horses or sheep it is very important that every horn should be mounted with a large knob.

S. EDWARDS TODD.

Auburn, N. Y.

TRANSACTIONS OF THE ILLINOIS STATE HORTICULTURAL SOCIETY FOR 1863.—There is one important fact that is urged on us year after year as we look over our subscription lists and note the steady increase from the State of Illinois, and that is the prominence which is given to Horticulture throughout the length and breadth of the Garden State. Everybody has heard of the Massachusetts State Horticultural Society, that is one of the fixed institutions of our country. Something is occasionally said of the Pennsylvania State Horticultural Society; but whoever heard of the State Horticultural Society of the Empire State, or that of Strawberry-growing and Peach-raising in New Jersey. If we mistake not the indications before us, Massachusetts will have to look well to her laurels. These Western States do not grow nor move slowly. Illinois has not yet distinguished herself in doing anything in a small way, and her State Horticultural Society does not appear to be organized on any other foundation than a broad, liberal and comprehensive one; it has all the elements of talent, financial ability, energy and success. The prominent and influential men of the State are among its members, and it possesses a vitality that has already marked out a prominent position. The Transactions for 1863 can be had bound and post-paid by mail for 90 cents. Address W. C. Flagg, Cor. Secretary, Alton, Ill.—*Horticulturist*.

☞ There is no egg so fresh as that from the farm. There is no milk so rich as the farmer's. No water so pure as from the spring or well where no city streets foul it. No health so good as the farmer's—no life so free from offense. How he sleeps! how he enjoys his meals! what an air he breathes! What an independent life he lives, giving bread to the world!

Dwarf Apples for Suburban Gardens.

But very few occupiers of small gardens know with what facility apple trees may be cultivated even in the smallest plot of ground. A few instructions may therefore not be out of place. In nurseries apples are generally grafted on two kinds of stock—on the crab stock to form large standard trees for orchards, and on a dwarf growing variety of apple called the Paradise apple, adapted for gardens; on this kind of stock apple trees form small trees remarkably prolific. There are two forms under which they may be cultivated in gardens—as pyramids, or upright trees, like the Lombardy Poplar, and as bushes in the form of a gooseberry or currant bush. It is this latter form that we earnestly recommend to town gardeners, and we must urge upon them the necessity of buying trees that can be warranted to be grafted on the English Paradise stock. The very dwarf French Paradise stock is too delicate for our climate, for while they are young, none but an experienced fruit gardener can distinguish any difference in their growth, so that trees bought of persons without a reputation to lose may prove to be grafted on the crab stock, and wofully deceive the planter by their vigorous growth and unfruitful habit.

The rather modern practice of cultivating apples as bushes grafted on the Paradise stock will in time lead to a revolution in the culture of apples, for, instead of waiting from seven to ten years before a good crop can be gathered from a vigorous apple tree grafted on the crab stock, trees grafted on the Paradise will, if two or three years old when purchased, bear some fruit the first season after planting, so that a tree planted in December, January or February, will gladden the heart of the planter by producing some fine fruit the following summer. Apples grown on dwarf trees are safe from violent winds, and are generally much finer than fruit from the earth.

These bush apple trees may be planted from 3 to 3½ feet apart, and the only pruning, or nearly so they require is done in summer, after this fashion:

In the month of June, as soon as the young shoots have grown to the length of 6 inches, 2 inches should be pinched or cut off from the end of each, and this must be done all through the summer till the end of August, or as long as the trees continue to make young shoots. In the course of three or four years they become compact, sturdy, fruitful bushes. At the end of that time, if they are too much crowded with shoots, some of them may be thinned out with a sharp knife in winter, when the leaves have fallen. If the culture of pyramids is preferred, the same system may be pursued, but the leading shoot must not be shortened till the end of summer, and then only to the length of 10 or 12 inches; on the whole bush trees are best adapted for suburban gardens. If the soil the trees are planted in be too rich, so as to give over luxuriant growth, they should at the end of two or three years be taken up and replanted; this will give them a healthy check.

Apple trees in small town gardens are apt to be infested with the American blight, a sort of aphid, which makes its appearance in the shoots, and is covered with a white substance like floss silk; a certain cure for this is an infusion of 4 ounces of

soft soap to a quart of warm soft water, applying it with a painter's brush.

A large quantity of useful apples that may be grown in a very small garden, by pursuing the method above described, is surprising.—*English Gardener's Almanac*


Health of Farmers.

Farmers ought to be healthy; if they are not it is their fault. Their occupation is certainly a healthy one. They are not cooped up in shops. They are not excluded from the sunlight. They do not sit bent over the last, or, plying the needle or the pen, gasping for pure air. They have abundant exercise; and, if they are not healthy, it is because their diet is improper, or that they over labor.

That farmers are careless of their diet as a class, is true. They live too much on salt meats. They do not have variety of diet. They should keep fine flocks of sheep—if for no other purpose, to supply their tables. It is but little trouble to kill a sheep every few days, and of all meat mutton is most healthful; it is far superior to pork.

Farmers are also neglectful of their vegetable gardens. They should have an abundance of every variety of the delicious vegetables. It is surprising how much excellent diet can be obtained from a well cultivated garden. The table can be made to groan with abundance. An excellent variety is always on hand to supply the most fastidious palate. The vegetable garden is indispensable to the health of the farmer and his family.

But the cultivation of fruit is most neglected by the farmer. It is true, every farm contains its apple orchard. But is this enough in this warm climate, where bilious diseases are so prevalent?—Why has the Creator given us fruits for early summer and all through the season and the year? Is it not to keep us healthful? Has he not supplied us with the most delicious as well as the most healthful food during the hot months of summer? Have we not large, luscious strawberries that will produce hundreds of bushels to the acre with a little care? And when they are not gone, have we not raspberries in profusion, if we will only plant them and care for them? And then we have currants, and gooseberries, and blackberries, and the luscious, glorious grape, all with their pleasant acidity to act upon the liver, and purify the blood and ward off disease. Cherries, plums, apricots, nectarines, peaches, pears and apples, also, should supply the farmer's table. Then there would be health and cheerfulness, and home would be pleasant and dear, and farming would be considered, as it is, the most healthful and delightful of professions.

 A tree grows through the roots. The numerous buds push forth, and there is the tree.—You have it in your power how this tree shall be formed—by pinching this shoot and favoring that, or removing this. In this way, how beautiful the order and arrangement of tree growing. And yet how we neglect our trees! Let them run at random; and the country at large tells us too much what this random is. Poor, neglected trees! When they might be such fine, agreeable sights, and just as useful as fine.

Gathering and Keeping Fruit.

It is becoming a well understood principle that pears are improved by being gathered before fully ripe. Some should approach nearer maturity than others. But early apples should be fully ripe, as a general rule, before gathering. Late fall and early winter apples should not be eatable when picked, and all the late winter varieties should be gathered when too hard to yield to the pressure of the thumb, and always before heavy fall frosts. A dry time should be selected, if possible. There will be a few specimens not yet mature, but you can afford to throw them out to save the best and the main crop. When a good keeping variety begins to drop freely from the tree, as is sometimes the case, secure the balance of the crop that remains on the tree as soon as possible; but they should not be mixed with those on the ground—not one should be saved with those picked. Wind-falls will not keep, for in addition to the injury sustained from the fall, they become heated by lying upon the ground exposed to the sun and the hot air, and the ripening process already commenced is hastening it to a rapid decay.

No matter how hot the weather is, an apple is always cool while upon the tree, and in that condition should be taken care of, if we would have it keep in its most perfect condition for the full development of all the delicious juices with which it is so abundantly supplied. How to obtain it in that condition will be my purpose now to show.—We have seen that it must be carefully gathered before it is too ripe, as it is commonly termed; but I say before it is ripe, for when it is *ripe* it is fit to eat, and should certainly be the case with winter apples when gathered.

We have also seen that heat hastens the ripening process, and that cold retards it. Apples should therefore be kept cool, barely so as not to freeze. A minimum temperature of thirty-four degrees is probably about right, with as little fluctuation as possible.

It is not for the purpose of assuming to know more than the most of you about the one best method of keeping apples, that I give the subject so large a space in my address, but it is to give it more prominence in our deliberations than it has heretofore had. I regard it as one of the points very much overlooked in all meetings of this kind.

Whether we regard the ripening process as a vital or a chemical action, it is quite sure that it should go on gradual and unchecked until all the good qualities are fully developed, and when the highest point of excellence is attained, then the fruit should be used. It is never so good as when fully ripe; but is frequently eatable for a long time. Some varieties become dry and mealy, others tough and leathery. Others, by being kept very cool, will remain in a very good condition for a very long time, or by the use of artificial means may be kept for an almost indefinite period.

I hold that the ripening process once commenced, goes on, no matter how cold, if frost is not present, slowly, perhaps, but uninterruptedly, until full maturity. Hence the importance of a cool cellar, which should always be dry and dark. It should be frequently aired, when the outside temperature will admit of it. Some varieties are much more sensitive to their treatment than others.—The Winesap, for instance, which has a thick skin,

may be abused a great deal in handling and but indifferently cared for in the cellar, and yet it will keep pretty well; that is, it will rot but little; but if kept close and warm, it is subject to a fungus that renders it scarcely tolerable to eat. But if it is kept cool and dry, all its best qualities are retained. It is also one of the varieties that does best keep on open shelves. The Belmont, on the other hand, which I regard as one of the best and most profitable apples, is very impatient of bad treatment. Its skin is smooth and thin, and flesh of a delicate texture. If roughly handled and kept in a warm room, it soon decays. If carefully handled and kept in a cool place, it keeps with very little waste till April or May. Indeed, it is with me one of the best of keepers.—*Trans. Ind. Hort. Society.*

CULTURE OF CABBAGE—Eleven thousand heads of cabbage may be raised from an acre. This, sold at five cents will bring five hundred dollars. It is said by those who have raised extensively, that it is one of the best crops to feed to stock—young stock and cows in particular. There is no doubt of it, and give largely of milk. Some object to its acrid taste and pungent flavor, as this is perceptible in the milk. But the objection is obviated in the case of young stock, and cows out of milk.

To raise cabbage, the richest of ground is necessary. We have known cabbage raised for a dozen years in succession on the same spot, and each crop a good one, varying, of course, with the season. But the soil was of the best kind, so that but little manure was needed. But the soil if still better, would have raised better cabbage.—Planted in a hogyard, or where manure has long lain, gives the best of crops—better than any we have ever seen. It is almost impossible to get your ground too rich for cabbage; and it wants depth as its long roots penetrate.

Cabbage, like berries, and all water-loving plants, dries the soil rapidly, and hence gives it a harsh sterile appearance, unless very rich and mellow. Irrigation cannot be too largely indulged in with cabbage. A thorough cultivation of the soil, deep tillage, will aid in this respect.

THE VARNISH TREE.—As Americans, we must be as independent as possible of other nations. Everything that our nation can produce should be grown here. It is bad policy to be sending our coin off to other nations, to pay their laborers and to build up their country at the expense of our own.

We all know the Japan varnish. It is obtained from a tree—a species of *Ailanthus*, but the *Rhus Vernix*. It would undoubtedly succeed well here. The *Ailanthus* that is so common here, was imported into this country by the Elder Prince, if we recollect right, and thrives amazingly. The *Rhus Vernix* is grown to a great extent in Japan and China, and the varnish obtained from it is a source of much profit to those nations. It is obtained by making an incision in the trunk of the tree in pretty much the same manner as is practised in gathering pitch from the pine. The yield is said to be very large, and the production of the article profitable. Who knows but that in a few years we shall see large plantations of the *Ailanthus* for varnish:

Pruning of Pyramidal Trees.

Some few years since, being much charmed with the idea of cultivating the peach tree as a pyramid I commenced that description of culture by having some trees potted. I am delighted with my perfect success in both modes of culture.

I found pinching in the young shoots of my pyramids in the first year of culture to answer perfectly. The second year it was equally so with the trees in pots—in short it continues so with them to this day. This is the fifth year of their culture, and I can see no reason why it should not go on for many years, for no method can be more beautiful and satisfactory. With my pyramids planted in the borders of my orchard house, I have had some little trouble, owing to their vigorous growth (in spite of occasional root pruning) and constant inclination of sap to the head.

When pruning them to-day, I found their stems pretty well furnished with branches full of blossom buds: but they are weekly and very unlike the crowns of the trees, which from being pinched in all the summer, are masses of well-ripened, robust, blossom-bearing shoots, by far too much crowded. I have, therefore, felt called upon to make some desperate amputations with my strong, sharp pruning knife, done in this way: I have cut out the central or crown branches of every tree, so as to leave it almost a flat head. This will tend to give the lower branches more strength, and the sun will have more access to the fruit. I have indeed, reason to believe that with trees planted out in orchard houses, either half standards or standards, this open flat-headed style of pruning will be found the most eligible.

I have tried another way, besides summer-pinching, to restrain the too vigorous growth of peach trees planted out. This is described in the 'Orchard-House, 11th edition, p. 82:—"In 1862, and again the past season, 1863, buds of some kinds of peaches and nectarines were much wanted for propagation. I therefore allowed some of the trees to make their first growth without being pinched. The shoots they made were most vigorous, many of them from 4 to 5 feet in length.—About the middle of July these were all cut off to within 4 inches of their base. The trees were loaded with fruit, and I thought that this sudden decapitation would put the crop in peril, and cause it either to cease to grow or drop off in its then immature state. To my surprise, the fruit has grown to its full size, and ripened well. The decapitated shoots have put forth numerous young shoots, which this day (Aug. 30) have been pinched to within 3 or 4 leaves of their base, and the trees look as they did last autumn—healthy, promising, and capable of bearing a good crop next year. I observe that their growth seems much more under control than those planted in the same border that have been under pinching all the summer." I have slightly deviated from this method, and have pinched all but 6 or 7 of these strong shoots, leaving them to grow without control.—Their vigor is most remarkable, and they exhaust the tree of much superabundant sap. About the third week in July they are cut down 5 or 6 inches; the buds at the base of each shoot break immediately, and form short spurs which ripen well during the autumn.

By this method, my planted out pyramidal

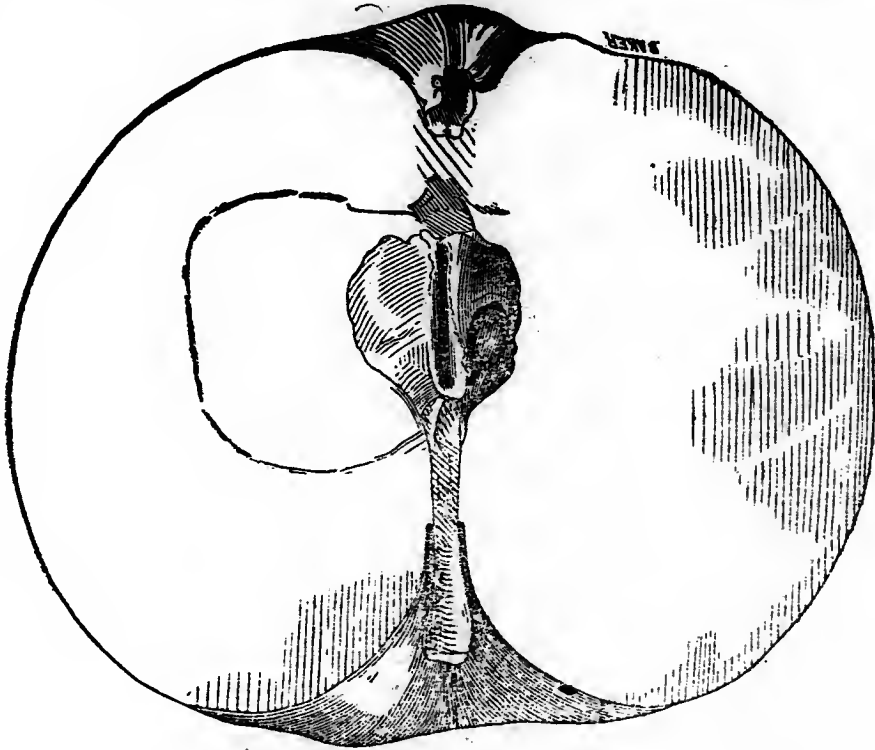
peaches and nectarines have formed themselves into flat-headed half-standards, slightly feathered down their stems, with branches rather weakly, still fruitful. These will in the end die off, and leave the trees half-standards, with open heads inclined to horizontal growth. As far as I can see, this is a most excellent mode of cultivating peaches and nectarines under glass. Among these trees, if there be sufficient room, trees in pots may be placed; and these, if pyramids, may be formed into perfect fruitful 'cordons' by summer pinching.

I have to add something rather curious, and which I confess is at present a mystery. In 1860 and '61 the fruit from the trees in pots in the same house was much superior in flavor to that from the trees in pots being in a warmer medium surrounded by the heated air of the house. In '62 the fruit from the trees planted out was decidedly superior to that from the potted trees; but to my surprise in 1863, although we had a bright, warm summer, it was just the reverse, for the fruit from the potted trees was infinitely richer than any gathered from the trees growing in the borders — *D. in Jour. Horticulture.*

SOW RYE.—Farmers would find it greatly to their interests to sow more rye. For winter and early spring pasturage, it is very valuable. All kinds of stock like to get a green nibble whenever it can be obtained in winter—and in spring it will furnish good pasturage before it can be obtained elsewhere.

It is not only as food for stock that we urge its cultivation, but it is of great value to the soil as a preparation for some other crop. It is almost equal to a coat of manure if the green crop is plowed in, in the spring. The soil is full of the roots of the plant, and there is also the coat which covers the surface—and if these are turned in, they ferment and decay, and consequently enrich the land. The coating will also prevent to a great extent the washing of the land by the severe rains of winter. The crop, if not plowed in, is a paying one. If our readers will put in a few acres of rye, they will not fail to sow it every fall hereafter. It should be sown at the same time and in like manner as fall sown wheat. It is not necessary to bestow the same preparation of the soil as for wheat, unless one feels disposed to do so.

OIL SPRINGS IN MISSOURI.—The Carrolton (Mo.) *Democrat* mentions the existence of indications of oil springs in Carroll county which may ultimately become valuable. For many years past, petroleum has been observed on the water of the springs in the county, and it was sometimes used with good effect in certain diseases. In some of these springs the petroleum was so plentiful that they were called Tar springs; but the existence of oil reservoirs in the earth was never suspected until a short time ago, when some Pennsylvanians visiting the county, having been attracted by the signs, examined them and came to the conclusion that the petroleum existed in sufficient abundance to justify boring for it. They therefore leased a track of land eight or ten miles square, and are preparing to bring forward machinery for vigorous operations. Should they be successful in opening oil reservoirs, Carroll county will become the seat of a trade of no little value.



Stannard Apple.

We are indebted to the *Prairie Farmer* for the above outline of this apple. We have nothing further to add than the fact that the trees are again loaded with an abundant crop of fine fruit, and that we have but few trees to sell. The demand of those who had the pleasure of seeing this valuable apple in bearing in our grounds having exhausted the stock of trees on hand.—ED. ILL. FARMER.

The above outline gives a fair average illustration of this apple, as we saw it growing a few days since in the orchard of M. L. Dunlap, near Champaign City. Mr. Dunlap has furnished us the following remarks relating to the apple.

"This variety of apple was received from the Buffalo Nursery of Col. B. Hodge, Buffalo, New York, in the spring of 1846. The trees came under the name of peach apple; subsequently under its true name, the modesty of the Colonel seldom allowing him to send out a fruit under its true name.

The trees fruited in 1849 and have given large annual crops of fine fruit up to the present time, (Oct. 1863.) Not a twig has been injured by winter, nor the crop in anywise lessened by frost. It bears the same relation to Romanite apples that the Keswick Codlin does to those of Summer, being an early and abundant bearer, and valuable both for the table and kitchen.

DESCRIPTION.—Col. Hodge, in his Catalogue for 1845, describes it as 'large, oblate, green, red and yellow; December to March; very productive; juicy, pleasant, fine.' To be a little more precise: the fruit is large size, slightly angular, rather flatish, and in some specimens tapering to the eye; skin at first a dull green, changing to yellow at maturity; deeply splashed and striped with red and dotted with numerous large russet specks, with a slight margin of pale russet about the stem; stem rather deeply inserted, half an inch long and hod-

ing the fruit firmly to the fruit spur; calyx closed, set in a moderate basin; slightly corrugated; flesh yellowish white, rather coarse, very juicy, with a rather rich sub-acid flavor; ripens in December and keeps through March; is a superior cooking, and a very good table apple. For cooking, it is in use from the first of September, and from that time to the first of April, has no superior for this purpose. Add to this that the tree is hardy in all parts of the State, is a rapid grower, a young, abundant and annual bearer. It is a fruit that should not be slightly passed over. The tree is a crooked, spreading, irregular grower, with large, deeply serrated leaves, the young shoots of a deep wine color, covered with a white bloom, with prominent white colored buds.

This variety has been fruited by several parties in Cook county, among them the 'Old Doctor' at 'The Grove,' and his brother, Joseph Kennicott, at Dunton Station. In my orchard at Leyden, Cook county, there are three trees that have borne fifteen annual crops."—*Prairie Farmer*, Oct. 3, 1863.

THE POTATO ROT.—At a meeting of the Farmers' Club, Mr. Carpenter stated: "I have read and observed a great deal on the subject of the potato rot, and the sum of the whole seems to be that potatoes planted in moist and tenacious soils are much more subject to rot than if planted in dry ground." Prof. Mapes remarked: "I had a field, half of which was under-drained, and I planted the whole to potatoes. On the under-drained portion none of the potatoes rotted, while on the other half they all rotted."

☞ He who pursues wealth and dispenses it not in alleviating the woes of his less fortunate neighbor, is an alien in the universe of God.

Alton Horticultural Society.

FRIDAY, Sept. 2, 2864.

Met at the residence of J. and F. Curtis, on the Grafton road, at 10 a. m.

The minutes of last meeting were read and approved.

Also a letter from Henry Engelmann, Assistant State Geologist, which was ordered to be published.

"I have just examined," says Mr. Englemann, "a salt obtained by Mr. James E. Starr, from under the limestone cliffs of his place. It proves to be the Epsomite (natural Epsom salt), which, when pure, is stated in the Hand books of Mineralogy, to contain 16½ per cent. of magnesia, 22½ per cent. of sulphuric acid, and 51 1-6 per cent. of water of crystallization. It might be used as a manure, especially for clover, instead of gypsum; or Epsom salts might be made of it by dissolving and recrystallizing it."

J. E. Starr read the report of the committee on Entomology:

Mr. President: The committee on Entomology having been instructed to report at this meeting on insects, received at the last meeting, respectfully submit the following:

From J. Huggins, a large collection. See his report.

From Jas. E. Starr, a caterpillar in spirits, showing the cocoon of the Ichneumon fly, which had fed on its vitals. Also an insect, habits unknown.

From H. G. McPike, specimens of the magfly.

From F. Starr, (injurious), 54 varieties of butterflies and moths, 11 do. of the grasshopper family, 9 do. of bosirs, 3 do. snapping beetles, 12 do. of beetles, 3 do. of wasps, 3 do. curculios, squash bug, pea bug, cicadia, horse fly, ants, and a bug resembling the squash bug, which is a veritable blood sucker, and at least not refusing that of the human family. (Beneficial.) Dragon fly, antlion fly, 2 kinds of tiger beetles, 2 do. lady bugs, lace wing, carrion beetles, 3 do. of spiders. An insect resembling the horse fly, name unknown; also 24 kinds of insects—habits unknown.

Among the butterflies and moths, we notice the codlin moth, destructive to apples, and the hawk moth, to tobacco.

The moths are attracted by lights in the night, and small fires built in the orchards and vineyards would destroy very many.

In the larvæ state they can be destroyed by syringing with whale oil, soap suds, by dusting with air slacked lime, by crushing by hand, and by permitting hogs to eat the fallen fruit. Birds feed upon them and they also fall victims to spiders and other predatory insects.

Among the grasshopper family, we find the grasshopper proper, the locust, (tree), the cricket and the katydid.

Among the beetles, the maybug. This is very destructive to strawberry beds and meadows in the larvæ state, and also to the leaves of cherry trees in the beetle state. Hogs will root them out, but of course also destroy the grass and strawberries.

The fires built for the moths would also destroy many beetles of various kinds.

The curculio should have uncompromising war

declared against him, and every means known should be employed to destroy him; jarring upon sheets is the most effectual, pasturing by hogs the easiest.

We have thus but glanced at the habits of a few of the insects exhibited, and at a few of the well known methods of destroying them. To enter fully into the subject would require more room than would be admissable in this report and far more knowledge than is possessed by your committee.

Respectfully,

E. STARR,
J. HUGGINS.

The committee on Fruits reported as follows:

We find upon the tables at the present meeting a variety of fruit affording a fine display.

From Mr. J. Huggins—Apples—Fall Pippin, Sops of Wine, Trenton Early, large and of fine appearance, Maiden's Blush, Rhode Island Greening, Pennsylvania Red Streak, Red Canada, Rambo, Wagner, Fameuse, Ramsdell's Sweet, Power's Large Red Crab. Pears—Howell, large, worthy, Bartlett, Louis Bonne, Duchesse d'Angouleme, White Smith, [?]

From Mr. Curtis—Apples—Fall Pippin, Hubbardston Nonsuch, Cortley, Roxbury Russet. Pears—Seckel and Bartlett.

From A. and F. Starr—Fall Wine, Maiden's Blush. Grapes—Isabella extra, Catawba and Delaware.

From J. E. Starr—Grapes—Herbemont and Concord.

From Dr. E. S. Hull—Grapes—Catawba, very fine, Concord, Clinton, fine specimens.

From D. E. Brown—Apples—Boxford and Maiden's Blush, very large.

From L. W. Lyon—Pear, for name. Apple—August Pippin.

From James D. Bishop—Pear, for name. Apple, for name.

From James Newman—Pear and Clinton Grapes.

From C. W. Dimmock—Seckel Pear, very large specimen. Grapes—Catawba, Anna, not recommended, Delaware and Diana.

From Messrs. Eisenmayer—Grapes—Concord, fine, Clinton, Herbemont, Norton's Virginia.

From J. M. Pearson—Delaware Grapes.

From W. C. Flagg—Apples—Fall Wine, Cooper, Maiden's Blush, Kirkbridge White, Keswick Codlin, Cole's Quince, Hawley, American Summer Pearmain, Summer Queen, Sine-quanon, Red June, Yellow Siberian Crab, Power's large Red Crab. Pears—Bartlett, Seckel, Summer Bergamot, and three for name.

From Louis Stieritz—Grapes—Catawba, Norton's Virginia, very large bunches.

From W. U. Miller—Grapes—Catawba, Isabella and White Fox. Pears—Bartlett, very large, Seckel, two pears for name, Louis Bonn.

From S. R. Dolbee—Grapes—Delaware and Concord.

From I. Allen—Grapes—Isabella and Catawba.

For the committee:

F. STARR.

The committee on Vegetables find no competition. We find specimens of the sweet potato, egg plant, lima beans and two varieties of pepper, from the garden of F. Curtis, all very fine.

D. E. BROWN, Chairman.

The special committee on Planting Trees, reported as follows:

Mr. President: The committee appointed at our last meeting to prepare a table of distances for planting the various kinds of fruit trees, shrubs, vines and plants, offer the following for the consideration of the Society.

Apples 30x30, pears, 25x25; root prunes 15; dwarf 10x10; peaches 18x18; plum 18x16; quince 12; grape 4x6, 6x6, blackberry 2x3; currant 4x6; gooseberry 4x6; raspberry 2x6; strawberry 1x4; hills 1½x2.

We would here mention the advantages of setting peach orchards in squares, each kind in a square of itself, thus: if 100 of a kind, set 10 each way. This will, by packing in the centre of the kind, be found an economical method.

The orchards should also be so arranged that hogs can be kept in such as it is desirable.

The above is respectfully submitted.

F. STARR,
J. HUGGINS,
E. CURTIS.

The subject was then taken up

A. S. Redfield thought the report gave too wide distances for apple trees. He would crowd trees close east and west.

Dr. Long plants 33x33 diagonally, making the distance 27 feet one way.

W. T. Miller would plant 35 feet rather than less.

E. A. Riehl—Every one should plant according to the fertility of his soil; not less than 30 in poor soil, and not less than 40 in rich.

J. Huggins—Set first at 32 feet; 16 years later at 30 feet, with additional tree in the center of the square. Late spring at 25 feet.

Report was adopted.

An essay was read by Mr. J. E. Starr, and requested for publication.

Mr. Riehl from the critical committee read a report on Mr. Johnson's mistakes in culture.

Dr. Long said it could not be shown that a rightly managed grain crop would injure an orchard. The Dr. would cultivate immediately after removing the grain crop.

The Secretary distributed copies of a pamphlet on trees and tree planting presented by H. D. Emery, of the *Prairie Farmer*.

A special committee on the best time and method of planting was appointed, consisting of Messrs. Huggins, Long and Flagg.

Dr. Long presented specimens of clover stools tightly wound together by a leaf-roller and killed. Has found it only on clover of two years growth. Referred to committee on Entomology.

Other insects presented were similarly referred.

It was voted that the Society send a contribution of fruits to the State Fair at Decatur.

Maj. Geo. Abbott, Stephen Ebert, Prof. Warren Leverett, Prof. Washington Leverett, Louis Stieritz, Jas. Smith, jr. and Isam Allen, were elected members.

A committee was appointed to examine a specimen of Catawba Wine of 1863, presented by Mr. Stieritz, reported:

MR. PRESIDENT: Your committee on Wines beg leave to report on specimens of wine made from the Catawba grape of 1863, by Louis Steiritz—of true flavor, high color, owing to the must being allowed to remain with the skins and stems.

This latter mode of treatment also imparts an asstringency to the wine which is considered by some an excellence, and no doubt adds to its value in a medical view. Wine very clear and of great body. Your committee regret to add that sugar was mixed with the must previous to fermentation. They think that wine from grapes should be *pure*, without intermixture either of sugar or alcohol. The different quantities of grape sugar in the different varieties of grapes will make an agreeable variety of wine and serve to indicate the quality of the grapes and their perfection; whereas if sugar be added it produces not only a sameness of flavor but at once loses the character of pure wine.

Your committee dwell upon this because they think it very important that any of us who contemplate making any wine should start aright, and this they cannot do if they begin by adding sugar to the juice of the grape.

Respectfully submitted,

J. M. PEARSON, Ch'n

J. M. Pearson was appointed an essayist for next meeting.

The October meeting was arranged to be at Mr. Huggins', and the November one at Mr. Flagg's.

Mr. Huggins called special attention to the Howell pear as a fruit of great excellence and promise. Endorsed by Dr. Hull.

The meeting was largely attended by ladies as well as gentlemen, and the repast furnished by the hospitality of the lady of the house added no little to the feast of pomological reason and flow of horticultural soul.

The Messrs. Curtis occupy 100 acres of land five miles distant from Alton, and within less than a mile of the Mississippi. Forty acres are in orchard, 30 in other crops, and 30 in woodland. The orchard contains about 2,500 apple trees, 12 years set, consisting mostly of Janet, Newtown Pippin, Ortley, Pryors' Red, Alexander, Yellow Belleflower, Fall Pippin, &c. The Alexander has proved very profitable with them, and they approve also of Early Harvest, Red June, Newtown Pippin, Hawles' Janet, Pryors' Red and Ortley, as good varieties. Baldwin bears well; but here is an early fall apple. Roxbury Russet drops badly, ripens early and is unprofitable.

There are also 600 peach trees in their orchard, 50 pear, 50 quince and 1½ acres of strawberries.

The apple trees are set 33x33 feet, with peach trees between a part. Since coming into the hands of the Messrs. Curtis, the orchard has been either cultivated or kept in clover.

Adjourned to meet at Jonathan Huggins', near Woodburn, on the Alton and Woodburn road, at 10 o'clock on Friday, Oct. 7th.—*Alton Telegraph*.

A PRIMEVAL FOREST.—The little town of Ega, on the Upper Amazons, in the heart of South America, originally a mission village of the Jesuits, but now a thriving Brazilian settlement, lies pretty nearly in the centre of the most extensive unbroken forest on the surface of our globe. It requires little effort of imagination, even to those who have not traveled beyond the limits of Europe, to form some general idea of what such a realm of arboreal vegetation must be; lying within a few degrees of the equator, bathed all the year through in an atmosphere like that of a forcing house for plants, drenched by tropical rains and heated by a vertical sun. The total length of this

vast forest, from west to east. is 1,200 miles, its breadth varying from 600 to 800 miles. Towards the east, indeed, it continues 700 miles further, terminating only on the shores of the Atlantic.—This easterly portion, however, or that which clothes the valley of the lower Amazons, I exclude from the present description, since it is, in one part, much broken and contracted in breadth by large tracts of open grassy land. The forest of the great plain of the Upper Amazons has sufficient compactness and peculiarity to be treated as a separate area. But as there is no complete break of continuity, the statement of Humbolt (who had a glimpse of the immeasurable wilderness only from its western commencement, in Peru,) still holds good, to the effect that a flock of monkeys might travel amongst the tree tops, were it not for the rivers, for 2,000 miles in a straight line without once touching ground; namely, from the slopes of the Andes to the shores of the Atlantic. At the top of the grassy slope on which the town is built, rises a compact wall of foliage, with a small narrow gap in the midst; the leafy barrier is the frontier line of the forest, kept from encroaching on the few acres of cleared space only by the inhabitants doing constant battle with powers of vegetation, and the gap is the entrance to the only road by land that the townspeople possess. A few minutes' walk under the shady arcade, and the traveler finds himself in the heart of the solitude. The crowns of the tall trees on both sides meet overhead, and admits the rays of the sun only at rare intervals, where some forest monarch has been uprooted by the storm. The path leads to a few small plantations belonging to the poorer inhabitants, and at the distance of about a mile dwindles down to a mere hunter's track, which none but a native can follow. Beyond this point all traces of the presence of man cease,—the land untrodden and unowned,—and so it continues for hundreds of miles.—*Good Words.*

VALUE OF SCIENCE.—The generalizer in botany, zoology, or any other science which may rightly be denominated the science of observation, must rely for his generalities on the aggregation of results of innumerable observations. Thus it was once supposed that a certain moss, *Buxbaumia aphylla*, was destitute of leaves, and it might not have mattered whether it had leave or not, except that there are physiological as well as technical reasons for concluding that a moss without leaves is an impossibility. It was Brown's good fortune to discover at the base of the footstalk true leaves like wisps of silk, and this observation tended to confirm and establish the law that all mosses have leaves, both of necessity and in fact. No observer can say what is the value of his observing; he may at the moment when he feels most deeply convinced he is but admiring or examining what has been admired or examined by every one of his predecessors, be actually taking note of something that was never observed before, and the result of his observations may in the end prove the untying of some gordian knot in classification, or the establishing some principle of utility that may be of incalculable benefit to mankind at large. The great Linnæus, by simple observation of the habits of *Cantharis Naualis*, was enabled to point out to the Swedish government how to avoid the loss of

many thousand pounds every year, through the ravages of an insect which destroyed immense quantities of timber in the dockyards of that country. The remedy suggested by Linnæus was the immersion of the timber in water during the period when the fly lays its eggs, and this was found to be completely effectual in putting a stop to the ravages. The same raster of the art of observing detailed the cause of a dreadful disease among the cattle of North Lapland, which was thought to be unaccountable and irremediable, but which Linnæus discovered to be owing to the prevalence of poisonous plants in the marshes where the cattle fed, and the eradication of these put a stop to the career of national calamity.—*Gardener's Weekly.*

CROPS IN THE GREAT SAN JOSE VALLEY.—What of the drouth? Let those who hear so much of the drouth in the San Jose and Santa Clara valleys, those who fear a famine for man or beast, just go and visit those gardens of our land, and in order to see them truly, go to that grand seminary of learning, the Santa Clara College, go up into the observatory (about 100 feet above the college ground) and take a view of the magnificent landscape from there. A grander scene was never pictured than an hundred miles' circuit around, one grand panorama of beauty.

This view presents no scene of drought or mildew, but one of beauty and fertility—orchards and vineyards, gardens and fields, richer than the mines of Golconda, and wheat is plenty. To a casual observer, the stacks of grain, the mountains of hay, and the vast amount yet spread over the plain, it would seem there was enough hay and grain, and fruit, and luxuries to supply the whole State. It is one vast sea of plenty. We only wish every speculator would go to this observatory and see what we saw this week—we don't think we are very near a famine.—*California Farmer.*

THE RASPBERRY.—No fruit except the currant and perhaps the gooseberry, can be so cheaply raised as the raspberry, and yet no fruit adapted to our climate is so much neglected. The raspberry, like most of our small fruits, has been much improved within a few years. Dr. Brinckle, of Philadelphia, has done more, perhaps, than any other man, to improve this fruit, having given us some of the best varieties now in cultivation, if not the very best, and what has been said of the strawberry may also be said of this, that it is difficult to tell how far this improvement may be carried.

Raspberries will grow on almost any good soil, but flourish best on a moist soil containing considerable vegetable mold. For garden culture, after spading in a good coat of well rotted manure and ashes, mark off your rows four feet apart, and if you have plenty of room, five is better, setting the plants two or three feet apart in the rows; in either case they will, if well mulched, (which I consider almost indispensable) soon fill all the intermediate space. A plantation of raspberries will need but little care for five or six years, except thinning out, so that the plants shall stand about a foot apart—tying up and heading in about one-third the length of the canes in the spring; laying down and covering the stocks in the fall with evergreens, leaves, or anything that will shield them

from the effects of the sun, when they are not covered with snow. If kept well mulched they will produce much better fruit and require but little weeding, and that can and ought to be done with the hands.

PIGEON MANURE.—A subscriber wants to know "what is the best way to use pigeon droppings.—How would the manure do for strawberries in a loose, sandy soil?"

Solon Robinson answers these questions as follows:

"I have used, within two or three years past about 150 barrels of pigeon manure, obtained from city dove coes. It has proved eminently successful until the present year, when, owing to the drouth, it has in most cases been useless, and in some injurious. My mode of using it has been to mix it with five or six times its bulk of muck, mold or loam, making up the pile out of doors where it would be exposed to the rain which softens the lumps, and by frequent turning mixing the ingredients well together so that the whole mass is extremely rich, and well suited for any kind of manurial purposes. It will be good for strawberries in a rainy season, and good for nothing in a dry one. It is purely an ammoniacal manure, and like guano and other manures of that class requires moisture to develop its value.—*N. Y. Tribune.*

TOBACCO FOR CUT WORMS.—Some years since I concluded on raising some cabbages for winter feed for my cows. With the assistance of my boys I planted several acres, and the next morning on looking at them I found a great many of them destroyed by cut worms; we planted more, and killed what worms we could find, but the next morning found hundreds of the plants killed. We planted more and strewed ashes, lime, salt, cow manure, chicken manure—and, in fact, everything I could then think of, but did not succeed in stopping their depredations; at last I came to the conclusion that the 'critters' had learned to chew, and that my best way would be to supply them with tobacco at once; I therefore put about half a pound of tobacco into a bucket of boiling water, and when it was cool, I took a pint cup and put a little on each plant as I pricked it out. I looked next morning and found one plant destroyed and the worm beside it dead. I always practice the same plan, and do not think I have lost a plant since; that year I saved 1500 out of 6000. I have tried tobacco for the bugs that infest cucumbers and melons, but it does not affect them as it does cut worms.—*Cor. Prairie Farmer.*

MOCKING BIRD.—We see in the *Country Gentleman* of of July 14th, a communication from Edgar Sanders, of Chicago, stating that a pair of mocking birds have taken up their abode in his garden, and are building a nest, &c. He asks if it is a rare thing to see them so far North? Mr. Sanders is undoubtedly mistaken about their being the well known Southern mocking bird. They are never known to come so far North as St. Louis. The brown thrush, resembling the mocking bird in size and appearance, has misled Mr. S. They mock and sing very well, but not equal to the real mocking bird. The brown thrush is very abundant here, and make the groves musical with their melody. They imitate a great number of birds.

Poetry.

From the Country Gentleman and Cultivator. ||

Prairie Scenes.

How broad and grand these waves of land,
On the vast solid sea!
The prairie swells of freedom tell,
Of boundless liberty.

Far as the eye can aught descry,
These waves of land are seen;
Before and aft, from right to left,
Clad in a fleece of green.

The tinkling bell of comfort tells,
Grazing upon the mead;
The joyous notes from feathered throats,
Proclaim all nature glad.

The stars of white and yellow light
Are sprinkled the grass between;
While 'neath your feet verbenas sweet,
Mingled with foliage green;

Their odors shed from their rocky bed,
Or to the breeze is flung;
While in the vale modest and pale,
Grow the pretty adder's tongue.

The primrose opes on the rocky slope,
Its bloom at the hour of repose;
At the dawn of day it fades away,
And its golden petals close.

The foxglove tells with its stalk of bells,
Of love and purity;
And the phlox beside speaks joy and pride,
In its crimson gaiety.

There are larkspurs bright, both blue and white,
And yellow polyanth,
And violet blue and lupin too,
And fragrant hyacinth.

The light how fair! how pure the air!
Yet few and far between;
The clouds above, in forms of love,
Like angel visits seem.

Yet when those clouds the earth enshroud,
And hide the eye of day,
And thunders hoarse utter their voice,
And flashing lightnings play—

How changed the scene! how dread earth's mein,
Upon this prairie sea;
As torrents pour, mid flash and roar,
And winds howl dolefully.

In a sorry plight is that luckless wight,
Abroad in a prairie storm;
Sad by daylight, but if in the night,
Then is he doubly forlorn.

The smiling dawn, the glowing morn,
Bursts grandly on our view;
All is ablaze with sunny rays,
As day rolls on anew.

Since for the head we find no shade,
The winds that want forestall;
The cooling breeze from the verdant seas,
Boundless and free to all;

The day rolls on and the sun goes down,
And twilight is o'er us thrown ;
Ere we are aware the shades appear,
And our brief twilight's gone.

The heat of the day has passed away,
The night is cool and still ;
Naught to molest our quiet rest,
And so we take our fill.
Olatha, Kansas.

W. BECKWITH.

Little by Little.

One step and then another
And the longest walk is ended ;
One stitch and then another,
And the largest rent is mended ;
One brick upon another,
And the highest wall is made ;
One flake upon another,
And the deepest snow is laid.

So the little coral workers,
By their slow but constant motion,
Have built those pretty islands
In the distant dark blue ocean ;
And the noblest undertakings
Man's wisdom hath conceived,
By oft-repeated efforts
Have been patiently achieved.

AGE OF APPLE ORCHARDS.—We observe in a number of the agricultural papers, statements from correspondents, particularly toward the South and West, that apple orchards begin to decline and decay at an average period of about 40 years from planting. We cannot learn that there are any orchards in the Western States that exist much longer than this period. There are some in New York and New England that are somewhat older, but even many of these show indications that they have passed their prime. Good cultivation in some instances, does not seem to prolong their existence, and it is questionable if the best system of pruning would produce greatly differing results. We invite information on this subject—for if this is generally the case, and the fact is known to planters, it would save unnecessary expense in attempting to renovate old orchards that are too old to be renovated. We are aware that works on fruit speak of apple trees that are two centuries old, but are not these instances very rare, if they exist at all in this country, however common they may be in the more equable and cooler climates of some European countries. The dwarf pear is often quoted as lasting fifty years in Europe when subjected to the best management and pruning. In the best dwarf pear regions in the United States there are now many trees twenty-five years of age, of those few sorts which succeed best. The question occurs, how much longer lived the apple is than the dwarf pear, when the latter is grown under the most favorable circumstances?—*Country Gent.*

AN ICE CAVE.—A correspondent of the *Scientific American* writing from Decorah, Iowa, gives the following report of a visit to an ice cave at that place:

"A friend and I started on a mid-summer trip, crossing the river in a boat, and commenced the

ascent of the bluff as usual ; it being very steep, and upon the whole like the river Jordon—"a hard road to travel." All difficulties, however, being surmounted, we arrived at the mouth of the cave, and sat down to rest awhile and cool ourselves ; looking at the thermometer, we found it stood at eighty. Here we found several pieces of candle and one old candle-stick left by other visitors.

We then commenced the descent, and as we walked, crawled and slid along, it began to grow cold quite fast, it seemed like going out of a warm room into the cold atmosphere of a winter morning. We soon began to see the frost on the walls, sparkling in the light of our lamps like millions of diamonds. This one sight is worth as much as all the natural exhibitions of every lover of the beautiful. As we came to our first stopping place we began to find ice from a mere film up to six or eight inches thick.

This part of the cave is in the shape of a wedge with the small end up, it being about six feet wide at the base, the sides drawing together overhead about twenty feet high—the one side covered with ice, clear as crystal, and the other with sparkling frost. Now we hung the thermometer on the wall and awaited the result ; the mercury going down gradually to thirty degrees where it remained.

We also had a little water in a cup, and after leaving it on the rock for about ten minutes, it became skimmed over with ice. There is not near the amount of ice in the cave that there usually is at this season of the year, and no doubt it is owing to the dryness of the season. The present spring and summer, so far, has been very dry in Decorah ; and I have noticed that the more rain we have, the more ice forms in and around the mouth of the cave. Two years ago, there was so much ice in the first fifty or sixty feet of the cave that we had to cut steps in it with a hatchet to get down with safety. A great quantity of rain fell that season."

LITTLE ACTS GREAT.—Little acts are the elements of true greatness. They raise life's value like the little figures over the large ones in arithmetic, to its highest power. They are the tests of character and disinterestedness. They are the straws on life's deceitful current, that show the current's way. The heart comes all out in them. They move on the dial of character and responsibility significantly. They indicate the character and destiny. They help to make the immortal man. It matters not so much where we are as what we are. It is seldom that acts of moral heroism of life is to do all its little duties promptly and faithfully.

Two things are necessary to make traveling with children a pleasure rather than a trouble—first, that they have faith in you ; second, that they implicitly obey you. Having the first they are without fear ; and where they have learned the second well, a word controls them. In fact, this is everywhere the secret of a happy life with children. In going around among the people one finds many a house where the children rule, or where their obedience is a matter of bargain and sale. Life in such a house is a bitter experience, and the end bitter.

State Fair.

We propose to give the mere features of the Illinois State Fair from day to day. The notes were taken at the time, and without any attempt at arrangement will be given as originally taken. We arrived on the grounds on Saturday morning, the 10th, and remained until 6 p. m. of the last day, taking the last train that left the grounds.

DECATUR, Saturday, Sept. 10th, 1864.

To-day is to be seen the incipient stage of the State Fair that is to be. The stream that is setting in from the depot is small, but is constantly gathering volume, and by night will have assumed highly respectable proportions. A large part of the arrivals so far are of stock, including sheep, cattle, mules and horses. The sheep department is likely to take the lead in the live stock department. Sheep from Vermont, Ohio, Indiana, Wisconsin and various parts of our own State offer unusual attraction. There will be no lack of entries in the cattle and horse line, but swine will hardly be heard of.

THE GROUNDS.

On entering the gate the Secretary's office will be found on the right; next in order comes the Sanitary Booth under charge of the ladies of Long Creek, who have hot coffee, cakes, pies, oysters, ice cream, new cider, etc. Next in order are the grounds for agricultural implements, with "Fawkes' Steam Plow Engine" for a setting of a center of the picture. This engine will furnish the motive power for the trial of machines, corn-grinders, and the like. Farm Products Hall is on the rise of ground just beyond and to the right of the President's office. In the narrow valley beyond is the State Sanitary Bazaar—a large building in the form of a Greek cross. In the front of this are four refreshment booths similar to that of the Long Creek booth. Two of these will be under charge of the ladies from Champaign county, and may be appropriately called "Champaign booths," with this slight difference: the cider sold will be sold as cider, without giving it a fictitious name. An old lady who was passing by, was told that these two booths were retained for "Champaign." "La, me!" said she, "just to think: cider and lager are bad enough; but to have *champagne* is an outrage! Such drunkenness! Well, I shan't come to the Fair; and, what's more, Eliza Jane must stay at home. I will not trust her in such a place!" The "Sanitary ladies" explained to her, and she is to assist in attending one of these soldiers' saloons.

The Vermillion county ladies will run one of the other booths, and those from Centralia the other, which is to be called the "Egyptian."

Moving farther on, we have "Fine Art Hall," and near it is a new fancy building, for the exclusive use of the Wheeler & Wilson Sewing Machines.

We have now reached the amphitheater, with its tier of booths underneath. At the top of the hill, to the right, is Fine Art Hall, in the lower part of which is the Fruit and Floral Department.

Passing down the hill towards the spring, we find a new structure—a "Dancing Floor." In this the exhibitor pays and the crowd will look on without charge.

I should have said that the McLean county ladies will have a booth near Art Hall.

THE DINING HALL.

A few steps brings us to the Dining Hall, in the charge of the Sangamon ladies. This, of course, will be the great center of attraction—about noon. The bill of fare will be the most varied and generous ever presented at the State Fair. Lady managers and lady waiters, with Watson to superintend, give promise that the crowd of hungry patrons will be pleased and the sick soldier benefitted.

On Tuesday, at 2 p. m., the Sanitary Bazaar will be formally opened by Gov. Yates. The Fair will not be in full blast until that time, as it will require all of Monday to get things to rights.

The want of laborers is severely felt, and all departments will be delayed more or less in consequence.

The officers are all working with a will to get things into shape as fast as possible. The indications for a great crowd are highly flattering.

The citizens of Decatur are active and determined to give satisfaction, and to this end will make daily canvass of the city for accommodation, and will have a committee at the Court House ready to show strangers to lodgings.

The Sanitary Department will need the help of the farmer and gardener, and each one should bring in something—a sack of potatoes, a barrel of apples, onions, beets, etc.

FIRST DAY.

DECATUR, Monday, Sept. 12, 1864.

Enthroned on the people's "Tripod," in the building set apart and dedicated to the "Press," we take our position, to note the doings of the great industrial ingathering whose vanguard is just beginning to enter the eastern gate of these magnificent Fair Grounds. It is eight o'clock—an early breakfast in the city, and an extra cup of coffee with the ladies in the Sanitary Dining Hall, and we are ready for work.

The note of busy preparation is heard on every hand, and at this early hour the scene is one of

deep interest and gives promise of success. Doubtless some department will come short of the public expectation; but that the exhibition on the whole, will be a fair exponent of the resources of the State, none need doubt.

The weather is all that could be desired; cool, clear, invigorating; just such as will best suit the grand holiday of the great army of workers, whether on the farm or in the work shop.

Proud are we that once a year, Labor can take itself from the field, the shop and the studio, and in a sylvan retreat like this, away from the noise and dust of the city, the clanking of mighty forges, the hum of fast revolving wheels, the jostling of commerce, the rustling of corn, and all the busy walks of life, to meet and mingle, to show their handiwork, to compare notes of progress, to gather up the products of their teeming soil, the useful implements of labor, and the beautiful in art and in nature.

To us the peaceful walks of life have a charm, and judging from the rapidly widening of the living stream that is entering yonder gate, we shall have plenty of company to join in doing honor to the free labor and the free institutions of the Prairie State.

THE SANITARY FAIR

Is a new institution that is interwoven into and made a part of the order of the week. It speaks to us of war and its attendant horrors; that while we are peacefully celebrating this progress of the industrial army, there is another army whose plows are the keels of "iron-clads," plowing the waters wherever the commerce of the nation peacefully floated; whose pruning hooks are swords; whose seed sowers are the loud-mouthed cannon, and whose reapers spread devastation and death.

Who will not lay some offering at this shrine of his country? Who will not give some aid and comfort to those who cannot attend this great gathering, who are far away in the trenches, beating back the foe who would strike down the free institutions of our land?

One prominent feature of the Fair is the active part the ladies are taking in it. The Dining Hall is in charge of ladies, as are also a large number of the booths. This of itself will form no ordinary attraction, and cannot fail of giving a high tone to the entire surroundings.

THE BAND.

E. Hull's Lee County Band have just arrived and are marching through the grounds and giving us a touch of their quality. This is one of the best bands of the State. It is composed of ten young men, and though called the Lee County Band, its members hail about equally from Kane and Lee

counties. Most of them labor either in the workshop or office.

BEET SUGAR.

"CHESTER, Sept. 9, 1864.

"W. H. Van Epps, President State Fair :

"We have this day shipped to your address one barrel of Beet Sugar from last year's crop of beets. It is the first barrel of beet sugar made in the United States. Respectfully yours,

GANNETT BROSS."

The above will be highly gratifying to the people of the West at this time of high priced sugar. We shall endeavor to learn the particulars in regard to this new production.

THE CITY FATHERS.

Already we have heard complaints in regard to transportation from the city to the grounds. It is reported, with how much truth we know not, that the city charges a license fee of five dollars, to which is added fifty cents Clerk's fees for the privilege of carrying passengers to the grounds. This, of course, must tend to lessen competition and thus leave the public to the tender mercies of the hackmen. This is to a great extent corrected by the Great Western railroad, to carrying passengers at fifteen cents each way, though not much effort has been made to post the public up in this respect. The charge for freight is enormous. We suggest to the City Fathers that they look to these abuses and have them abated at once. If the price cannot be regulated, do put in so much of competition as will correct the evil. If farmers and farmers' boys were allowed to carry passengers and do hauling without taking out license, the rates would be speedily reduced. No efforts on the part of the citizens appear wanting to make the fair a success. Their charges appear satisfactory, and doubtless all who attend will be accommodated. The experience of last year has been useful, and less complaint must follow. One advantage of the permanent location of the Fair will be to accustom the people to its proper management.

SIDE SHOWS.

These are to come within the grounds and be under the control of the Society, instead of keeping up an everlasting din outside to draw off gaping crowds, and to cheat the Society out of a much needed revenue. Fat babies, Borneo children, giants, snakes, wild and tame animals, with an extensive list too numerous to mention, and which we leave the public to investigate at their leisure.

AFTERNOON.

The busy note of preparation is going on, and by to-morrow the Fair will be in presentable shape. The want of help is more and more felt. Parties from a distance are unable to obtain the usual assistance, and consequently must lag behind.

Agricultural implements are being unpacked in very respectable numbers, among them some new ones. A corn shock hauler pleases stock growers.

Gang plows are largely represented, and show no inconsiderable improvement over last year.

The only cider mill on the ground is the 'Hutchinson,' a cast iron mill, presented by Austin & Boal, of Chicago, and which the Sanitary ladies have taken charge of, supplying the thirsty multitude with pure cider, but of course on not as large a scale as those run by steam. The large mill can be run by horse or hand power.

Brown's Corn Planters are, as usual, on hand, and present some new features, such as more accuracy and certainty of dropping, the planting of broom corn, sorgo and beans, adjustable to wide or narrow rows. It is too well known to require further comment.

POWER HALL

Will not be in running order for one or two days yet. No sorgo machine has as yet arrived on the grounds. The immense demand for this kind of machinery is doubtless the reason for this neglect.

On the whole the show outside of the Sanitary Department will be less than last year. At the same time, there will be no want of attractions.

To-morrow the entries will close and the active business of the Fair commence.

11½ A. M., pacing, mile heats, best three in five, to go as they please. Premium, \$300; \$200 to first and \$100 to second.

NATURAL HISTORY DEPARTMENT.

The Natural History Department will be largely represented, being the best exhibition of the kind at any previous State Fair.

The receipts for tickets and gate fees reach \$550—two dollars less than the corresponding day of last year. In addition \$920 has been taken for side shows, peddlers and swings, making a total of nearly \$1,500. We can therefore safely predict a successful Fair.

SECOND DAY.

DECATUR, Tuesday, Sept 13, 1864.

We now enter upon the second day of the Fair and yet to a great extent chaos reigns. The note of preparation is becoming intensified, but must soon cease. The trains all came in fully loaded this morning, and already the grounds swarm with visitors. The several Sanitary departments have assumed form and are in working order.

The local train on the Great Western railroad, with its ample accommodation and sharp competition, is reducing the hackmen to order and holds them within bounds. Mayor Peddicord is looking after the draymen and the prospect is that little complaint will be heard hereafter on this score.

PRESIDENT'S ADDRESS.

At 10 A. M. the Board met to listen to the opening address of President Van Epps, and were gratified with what all who know the President would expect—a straight-forward and practical address.

Two thousand copies of it will be printed and circulated on the Grounds. A prominent subject discussed in the address was the disposition of the College Grant fund. Politicians run the country fifty-one weeks in the year, and the farmers run it one—during the State Fair. As the industrial classes form a majority of the people, and as the College Grant fund was given to the State for their especial benefit, the President suggested that they

should be consulted in regard to its disposition, instead of turning it over to politicians and professional men.

It is proposed to hold a meeting some evening during the week to consider what action, if any, is required to secure the College Grant fund to the use of the industrial classes.

PACING MATCH.

Purse \$300—Best three in five. 1st prize, \$200; 2d, \$100.

ENTRIES.—Jas. Conlish entered "Capt. McKinney," a gray roan. Lewis Glinn entered "Polly Ann," a chestnut mare. J. W. Walkington entered "Dick Turpin," a sorrel gelding, (withdrawn.) J. E. McCoy entered "Shell Bark," a gray gelding.

The first heat was won by "Polly Ann" in 2:25½, "Capt. McKinney" coming in second.

2d heat.—"Capt. McKinney," in 2:23½; "Polly Ann" second.

3d heat.—"Polly Ann" won in 2:28½; "Capt. McKinney" second.

4th heat.—Won by "Polly Ann" in 2:29½. "Polly Ann" took the 1st prize and "Capt. McKinney" the 2d.

Deere & Co. have a large display of Moline plows, among them a cast-steel plow. The latter plow we have used, and find it the best stirring old land plow that has come under our notice. The reputation of the Moline Clipper plow is well established from Maine to California, and is a proud achievement for our State.

Parlin & Olendorf, of Clinton, DeWitt county, also have a good stock of plows of the various patterns. John Dement, of Dixon makes a fine display.

The above parties competed at the trial of implements a year ago, the latter taking the blue ribbon; but a new trial might possibly change the condition of things.

Two horse cultivators are in abundance; among them Furst & Bradley, Fielding & Co., Darling & Preser, of Chicago; Pratt & Woodbury, of Tazewell county; Stout, of Fremont; Taylor, of Centralia; Roberts, of Jacksonville; Barber & Howley, (Stafford patent,) W. D. Dorsey, of Decatur; Brewster, of Nokomis; Houghney, of Atlanta; Miller, of Livingston; Sparks, of Wyandot; Belt, of Morrison; Taliefero, of Rossiter, Henderson county; Smith, of Peoria; Kinyon, of Amboy; Huling, of Granville; Deere & Co. of Moline; Markham, of Bushnell; and Denton, of Pekin.

The above shows in what estimation these new implements are held, and the commendable ambition to supply the demand. It would appear that competition is active, and yet all find a ready sale.

Cultivators with seeding apparatus combined are also fully displayed as follows:

Swain, of Ripon, Wisconsin; Broadcast Seed Sower, covers with a series of double shovels; T. B. Wickidell, of Novane, Ohio; Barber & Howley, Decatur; Furst & Bradley, Chicago; Schofield, of Freeport; Denton, of Pekin. This array looks like a sharp competition with the grain drills, but these come up to speak for themselves, and are arrayed as follows:

Swain, of Ripon, Wisconsin; Shockley, of Litchfield, Illinois; McSherry, Kneisly & Co., of Dayton, Ohio; Joseph Ingall, Milton, Indiana. It will be seen that only one of the above hails from our own State, while the broad-cast cultivators are fully popularized.

REVOLVING HORSE RAKES,

Already so popular, are represented by a single implement from Oswego, Ill., made by S. E. Arment & Co.

SPRING TEETH HORSE RAKES.

Wm. Fielding & Co., Chicago; J. S. Sheirman, East Berlin, Pennsylvania; W. H. Alexander, Canton, Ohio; Roach & Kennedy, Abingdon; Galt, Tracy & Co., Sterling; Johnson, Richmond & Co., Chicago.

TWO HORSE POWER

W. P. Sanger, Joliet; Burnum, Baker & Wakeley, Michigan, and E. W. Skinner, Madison, Wis., have well made machines.

FANNING MILLS.

Dickey, of Racine, has three very valuable mills.

CLOVER HULLER.

John C. Birdsill, of South Bend, Ind., the only exhibitor.

CIDER MILLS.

The competition in this line is quite active, and we have three exhibitors, as follows: Cowles, Higgins & Co., Freeport. This is a new mill, passing the pumice between cast iron rollers. It should have a thorough trial. Austin & Boal, Chicago, "Hutchinson's patent;" J. E. Baldwin's of Springfield, "Baldwin's patent;" Cook & Utter, of Rockford. Cider is becoming popularized, and it is to be hoped it may drive out stronger drinks which have been so much used in this State.

Later the Kentucky mill and one from Spring Hill, Whiteside county, of Messrs. Hurst & Co.—Cider is becoming an important article of commerce in all of our towns, and the last cider mill will of course be sought after. We had no time to devote to a thorough trial, and the committee who had the subject matter in charge were overburdened with work and had only time to make a guess as to the best mill, and we fear guessed wide of the mark. We must defer a full discussion of this matter until the November No. of the *Farmer*, when we shall have had an opportunity of more practical knowledge of these several mills.

HORSE POWER CORN SHELLERS.

W. P. Sanger, of Joliet, is the exhibitor.

HORSE HAY FORKS

Are attracting much attention, and they are in constant work, loading and unloading, much to the gratification of a large crowd of farmers. Of these, "Palmer's" is taking the lead, in connection with its hay cultivator. Belt, of Morrison, and Wicks, of Kansas, Ill., are competitors.

STRAW CUTTERS.

These are numerous and represented by J. Powers, "Landi's patent," South Macon, Ill.; W. D. Schooley, "Hunt's patent," Richmond; Godman, Morris & Co., Indianapolis, Ind.; J. G. Page, Rockford.

LARGEST AND BEST DISPLAY OF AGRICULTURAL IMPLEMENTS.

Emmerson & Co., Rockford, are the only claimants.

BURSON'S BINDER,

Attached to J. H. Manny's Reaper, is attracting crowds of visitors.

RECEIPTS, ETC,

The receipts to-day for gate fees and entries foot up \$2,140, against \$1,355 same day last year. Can we ask for a more gratifying start of things, showing the onward progress of the State in population, or fair goers, to say the least.

Our fears of yesterday that the show would fall below that of last year, have not been realized, as the late trains have been loaded, and the grounds now present a most magnificent display.

About 9 o'clock P. M., the gate keeper made an inside survey of the grounds and found several hundred persons camping inside without the "season ticket," and made collection of 30 cents each, realizing several hundred dollars, much to the chagrin of the delinquent parties.

THE FARMER'S MEETING.

The farmers met at the Union Club Room in the city at 7 P. M. for the purpose of discussing the College Grant Fund.

On motion of Col. J. Wentworth, C. W. Murtfeldt remarked on taking the chair that the object of the meeting was to have this grant applied to its legitimate purposes. We do not want it parcelled out to sectarian colleges. What we want is to see that no one be sent to the Legislature but those who will pledge themselves to give us their best aid in favor of the proper use of this fund.

W. W. Corbett was chosen Secretary.

B. G. Roots, Esq., of Tamaroa, away down in Egypt, was called out and spoke to the point. He maintained that Gov. Yates had doubtless been led into an error in the appointment of the committee for the purpose of parcelling out this grant. This grant is large, being the script for 480,000 acres of land.

When any of our farmers' sons attend one of the old colleges, he is treated civilly only after he can properly pronounce *haec, hoc*, not to learn how to plow, how to hoe and how to manage a farm. Our boys on the farm know something of farming, but we want to extend their knowledge.

K. K. Jones, of Quincy, offered the following:

Resolved, That this fund shall only be used for its legitimate purposes.

Mr. Periam, of Cook, said that the act is positive. The fund must be applied to educate the agriculturist and the mechanic.

Mr. P. proposes a committee of five to draft resolutions for the consideration of the meeting.

Col. Wentworth took up the subject of the Governor's committee, and their claims on this fund. He was for instituting a school which our sons should be allowed to attend so soon as they shall have graduated from our common schools, and which he may attend and graduate in this commercial and agricultural school. He would ask Gen. Oglesby to tell this meeting whether he was for the sectarian schools or for us.

Gen. Oglesby came forward and said that he had no objection to giving his views. He did not think that he knew more of *Greek* than the distinguished gentleman himself. It was probable that both of them understood the Sucker tongue better than any other. He was himself a greasy mechanic and a muddill. He would leave this grant in the hands of farmers and mechanics, and whatever they may wish to do with it for their benefit.—Whenever the Legislature shall have passed a law

disposing of this grant, though he could not pass any law, he would sign no law that should not respond to the wishes of the people.

A committee was appointed to report at an adjourned meeting, viz: B. G. Roots, of Perry county; Capt. J. N. Brown, of Sangamon; Jonathan Periam, of Cook; O. B. Galusha, of Kendall; and Dr. Fellows, of Vermillion.

Gov. Yates being present, was called out. He would say that he was charged with derelictions of duty to the farmer and the mechanic, but to this charge he could not plead guilty. He would say that he had not given this subject much attention, but that he had always stood by the cultivators of the soil.

The subject was further discussed, when the meeting adjourned to meet at the same place on Thursday evening, to hear the report of the committee and to take further action in the premises.

THIRD DAY.

WEDNESDAY, Sept. 14, 1864.

This morning the attendance is immense, and the grounds have never before been so well filled. Contrary to the expectation of the most sanguine, the number of entries show little falling off from last year, while the receipts are greatly in excess of last year.

FLORAL HALL.

Alas for Flora and Pomona! Few offerings are laid on your shrines; your halls look desolate.—But there is one consolation, the Sanitary Fair is the gainer, and at least partly accounts for this neglect. The premium list is also at fault. May we not hope to see it more ample for the next show?

APPLES.

Charles H. Rosentiel, of Freeport, makes a good display of 32 varieties of apples. Of grapes, he has Hartford Prolific, Isabella, French Wine, Concord, Diana, Catawba, Clinton, Delaware, Golden Chas-selas, White Sweet Water, Marfaseen, Union Village, Little Burgundy, Black Cluster, Ontario, Arrow. Certainly a large collection when we take into consideration his Northern location. Mr. R. has been very successful with the grape. He plants 6x8 feet apart, and trains on trellis. He has also five varieties of pears.

Seth C. Jones, of Carbondale, shows 20 varieties of apples and four of pears. All this fruit is large and fine, as usual, from Egypt. This collection was grown on a six year old orchard, and is part of a crop of 500 bushels of apples. A very good beginning for 1000 trees.

Wm. Yates, of Springfield, from his orchard in Perry county, exhibits a large collection of pears. Among this fine display we note Duchess smaller than usual; Belle Lucrative, Swan's Orange, Steven's Genessee, very fine; Deurre Dial, White Doyenne, &c. On the whole, the size is below the usual standard for Egypt.

W. H. Hauson, of Lee county, has the largest collection of apples—in all 64 named varieties—and six varieties of pears. Mr. H. is one of the most successful orchardists in the State, and his collection of course is superb. He says he can grow pears as cheaply as the apple. He is a believer in locations favorable to the pear and these should be sought out.

Stillman Barber, of Piatt county, shows 40 varieties of apples; a good collection for a farm orchard. W. & A. J. Cutter, of Adams county, have a good collection, comprising fifty varieties of the grape; very fine Concords.

CAPPS' MAMMOTH APPLE.

Capps' apple is a perfect Brobdnag for size nearly round, with a fine blush on a yellow ground. These enormous apples first attracted my attention at the State Fair held at Jacksonville. They average about two pounds each. Of course a knife about them would be contraband, and we cannot enlighten the public in regard to their eating quality.

Martin Allen, of Mendota, La Salle county, shows 35 varieties of apples and two of plums. One of these is the "Lombard," the most valuable plum for the prairies that has come under our observation.

C. W. Murtfeldt, of Rockford, has a good display of apples, but the drouth has lessened their size.

Dr. Shroeder, the little Dutchman from Bloomington, nearly monopolizes the grape show. Catawba in great clusters. Concords with their ample berries covered with bloom; "the grape for the million;" "Bland," that resembles the Diana, etc.; Mead's Seedling is later than the Catawba, and at this time presents in this respect, a marked difference; Anna which the Dr. calls a humbug, though Dr. Grant lauds it highly; "Lincoln," not hardy; "Red Nonkey," a seedling from the Catawba, but of less value; "Louisa," similar to the Isabella; "Hartford Prolific," a very valuable grape; "Perkins," an early and valuable table grape—hardy; "Hyde's Eliza," a rough skin—poor; "Muscataella," a rich, early, hardy and productive grape; "Blood's Black," the earliest of American grapes—rather musky; "Herbemont," not ripe, a good wine grape; "Crevelling," early and large; "North Carolina Seedling," large and showy; "Mary Isabella," like the Isabella; "Muscadine Franklin," similar to Clinton; "Lenoire," a small, late grape for wine; "Norton's Virginia," the great wine grape.

ART HALL.

This hall is not so well filled as it should have been; yet there are several valuable collections.

A collection of woods of Illinois, with leaf, twigs and flower, by Frederick Brendel, of Peoria. This collection is quite fine and attracts marked attention.

Prof. C. D. Wilber, of the State Natural History Society, has an extensive collection from their rooms at Bloomington. First among them is a large collection of fossil plants, from the coal mines of St. Johns, in Perry county, numbering about one hundred species of the flora of the old carboniferous period, far away beyond the time of Adam. A lady visitor called the attention of her gallant to the beautiful "fish scales" on those rocks. Prof. Wilbur drew a long sigh and said, "Ah, yes, fish scales!"

A fine collection of petrification and corals are flanked by a jaw of the mastodon, dug out of some hill side in Madison county. The collection of fresh water shells is quite complete for this State. The collection of Illinois flora, by Dr. Vasey, of McHenry county, is very fine and valuable for the botanist.

Couchology and minerals, by O. S. Munsell, Bloomington, attract a large share of attention. The Illinois Wesleyan University, of Bloomington, has a large collection of Insects, Fossils, Birds, 500 specimens of Illinois plants, 175 specimens of minerals and iron ore, and a large collection of fresh water shells.

Phil. M. Springer, a lame boy of Springfield, has some dozen cases of insects, illustrating the entomology of Illinois, numbering 890 species. T. Hart, painter of Springfield, has a fine display of his genius and ready brush.

Pastel painting is presented by Mrs. Stevens, Mt. Morris.

"Lincoln's Home," a photograph by W. B. Colt, Springfield, is a truthful picture.

Marine views, by Thomas Hart, Springfield, are very fine. Samples of painting by the same are highly creditable.

Brown & Chandler, of Chicago, have a fine display of wood engravings. Specimens of penmanship, off hand and round hand, by G. L. Mathers, Carlinville, very tastefully done.

A large lot of photographs, by E. A. Burwell, Decatur, attract attention. A very fine picture of two animals, by Frank French, 12 years old.

Several other paintings of various kinds finish the circuit of the hall.

THE RING.

The ring is the place where the crowd is found. Men, women and children all have a love for the horse, and in spite of all that may be said against trotting and horse racing at our fairs the thing will be continued to an indefinite day, and only end with the fair itself. There is and will continue to be, jockeying and betting, but large numbers will go there simply to see that noble animal show his speed and grooming. Take away the amphitheatre and the trotting match, and you have shorn the fair of half its proportions.

We see ladies who attend the fair for the first time, and who have been eloquent over the abuse of horse racing, stand up hour after hour in pleased admiration, selecting the pet and entering into the spirit of the course.

The ring is, and will continue to be, the center of attraction so long as the horse has a place on the farm.

SINGLE TROT IN HARNESS.

Best three in five; first prize \$300, second best \$100. Lady Sherman, by J. H. Conlisk, Chicago. Lady Turner, by J. Turner. Lady Sherman won in three heats; time 2:41, 2:28½, 2:27½.

WOOL GROWING.

The Illinois Wool Growing Association met at 2 P. M. to-day, A. B. McConnell, President, in the chair.

On motion of B. G. Roots, a committee was appointed to draft a constitution.

The meeting elected A. B. McConnell, R. P. Thatcher and Dr. Fellows as such committee.

Dr. Clapp, of Peoria, Mr. Boardman and others advocated the importance of a permanent organization of Wool Growers. It was

Resolved, That this Association petition the Legislature to offer a bounty on wolf scalps and a tax on dogs.

Meeting adjourned to 2 P. M. to-morrow.

AWARD OF PREMIUMS.

Durham Bulls—3 years old and under. 1st premium \$25, to Grand Duke Adrin, owned by J. M. Hill, Berlin, Ill. 2d premium \$15, to White Cloud, owned by Lyman Marcus.

Two years and under 3. 1st premium \$25, to Woodford, owned by Wm. Sandusky, Catlin, Vermillion county. 2d premium \$15, to George B. McClellan, owned by H. Sandusky, Vermillion county.

One year and under 5. 1st premium \$25, to Woodbine Duke, owned by J. M. Brown, of Sangamon county. 2d premium \$15, to Mortimer, owned by W. H. Beverly, of Logan county.

Bull Calf, under 1 year. 1st prize \$25, to J. W. Singleton, owned by John Hill, Macon county. 2d prize \$15, to Highland Duke, owned by J. M. Hill.

Durham Cows—4 years. 1st prize \$25, to Fair Frances, J. M. Hill, Macon county. 2d prize \$15, to Prince Royal, owned by J. N. Brown, Sangamon county.

NUMBER OF ENTRIES.

<i>Class A, Cattle</i> —Short Horns.....	273
Devons.....	21
Sweepstakes.....	29
Work Oxen.....	4
<i>Class B, Horses</i> —Sweepstakes.....	60
Jacks, Jennets and Mules....	35
Carriage and Saddle Horses..	69
All Work.....	52
Thoroughbreds.....	25
Draught.....	51
Roadsters.....	50
<i>Class C, Sheep</i> —French Merinos.....	13
Long Wool.....	21
Middle Wool.....	27
Spanish Merinos.....	46
Common and Grade.....	33
Fat Sheep.....	7
Sweepstakes, all fine wool...	5
<i>Class D, Swine</i> —.....	22
<i>Class E, Poultry</i>	16

The receipts to-day amount to \$3,740, against \$2,402 last year, making a very gratifying state of things financially.

BIENNIAL ELECTION—LIST OF OFFICERS FOR THE NEXT TWO YEARS.

The regular biennial meeting of the delegates from county agricultural societies to elect officers of the State society, was held at 6 P. M. The attendance was large. The following officers were elected:

President—A. B. McConnell, of Sangamon county.

VICE PRESIDENTS.

State at large—Hon. John Wentworth, Chicago.

1st Dist.—Geo. W. Gage, Chicago.

2d Dist.—Robt. P. Lane, Winnebago.

3d Dist.—Chas. H. Rosenstiel, Stephenson.

4th Dist.—Graham Lee, Mercer.

5th Dist.—Wm. A. Pennell, Putnam.

6th Dist.—O. B. Galusha, Grundy.

7th Dist.—J. H. Pickrell, Macon.

8th Dist.—G. W. Minier, Tazewell.

9th Dist.—J. Lasbury, Schuyler.

10th Dist.—E. D. Shumway, Christian.

11th Dist.—A. J. Percy, Marion.

12th Dist.—S. B. Chandler, St. Clair.

13th Dist.—H. S. Ozburn, Perry.

Corresponding Secretary—John P. Reynolds, Marion.

Treasurer—J. W. Bunn, Springfield.

The election went off with great harmony. The new Board is much larger than the old one, and is believed to be made up of first rate material.

At the close of the meeting a resolution was offered thanking the old Board for their care over this great State institution, to which the members added three rousing cheers for President Van Epps. The enthusiasm with which the old Secretary was re-elected, was a just tribute to his eminent services as an officer of the Board.

FOURTH DAY.

DECATUR, Thursday, Sept. 15, 1864.

Again the sun comes up in his majesty unclouded, with a cool northwest wind, giving a guarantee of fine weather to-day and to the end of the Fair. The dust is the only thing becoming obnoxious.

Yesterday we found it impossible to dive through the crowd, either in the Farm Product Hall or in that of Textile Fabrics. But to-day we shall have a more quiet time while the committees are making their examination.

SEWING MACHINES.

The most prominent features in the hall of Textile Fabrics are the sewing machines. As you enter, to the left is the collection of machines from the well known Chicago house of the Grover & Baker Machine Co. Those number five, showing the various styles in which the machines are offered to the public. They are not machines got up for the purpose of show, but as samples from their sales room. The prices of their machines range from \$55 to \$150. All machines, so far as durability and execution, are made alike, the difference in price depending on the style of finish. Thus, a farmer who buys a \$55 Grover & Baker, will have just as valuable a machine, for all purposes of use, as his more aristocratic neighbor who pays \$150, the extra cost being mainly made up of mahogeny, silver plating and varnish.

This company have also on exhibition the most beautiful and varied assortment of samples of machine work, embracing every variety of ornamental, plain sewing and embroidery that we have had the pleasure of examining. Among the noticeable articles is a piano cover, made by a young German girl who has had but a limited experience with this machine, and yet it is one of the most elegant and tasteful articles of ornament for that popular instrument that we have seen.—Certainly no hand work can approach it. The samples of plain and substantial work are also the admiration of all visitors at the Fair. Who will say that the sewing machine has not taken another wrinkle from the brow of care, and brought roses to the cheeks and smiles on the faces of those made only "a little lower than the angels."

L. Cornell & Co., of Chicago, exhibited three of Wilcox & Gibbs' machines. These machines run remarkably still, and are becoming deservedly popular. They are sold at \$56 to \$175, and the same remarks in regard to style of manufacture as used above apply to this also.

The only other machine in the Hall is one of the old Wheeler & Wilson, on which Messrs. Secor & Butler, of Chicago, are exhibiting the "Secor improvement," a "loop check," which adds so materially to the value of that machine. We would call the attention of all who have a Wheeler & Wilson to this improvement, as it does away with

that old annoyance the pad, and will run over seems at high speed, and draw up the thread without the necessity of stopping to increase the tension, or danger of breaking.

Of Pianos the display is not large, but the instruments are all of superior merit. Root & Cady, of Chicago, exhibit one of the Wm. R. Bradbury new scale piano, a most superb instrument. In breadth and depth of tone it cannot be easily excelled. The finish and style is that of a four round with serpentine moulding and carved legs. The laudations of this instrument that have come to us from the East, are fully sustained in the trial here.

Mason & Hamlin's Cabinet Organ, an instrument similar to the melodeon, but in many respects superior, is attracting no small share of attention, and to all those who are unable or unwilling to purchase a piano, it presents itself favorably. Almost any farmer boy, though his fingers may be a little stiff, can easily master this instrument and make it a source of enjoyment to himself and the other members of the family.

G. W. Chatterton, of Springfield, shows five pianos; one of Marshall & Trover's, the Parlor Gem, and four from the well known house of Wm. Knabe & Co., of Baltimore. They will combine in an eminent degree all the qualities of a good piano.

Chatterton has supplied a large number of homes in Central Illinois with those superb instruments.

ARTIFICIAL LEG AND ARM.

No article in the Hall more fully absorbs the attention of a large class of visitors than the above. The war has left its victims over our prairies, and it is no wonder that their friends are anxious to mitigate, as far as possible, their unfortunate condition. The friend of the one-armed and one-legged soldier has a right to be interested in these valuable artificial limbs, so indispensable to an unfortunate soldier.

Those on exhibition have been approved by the United States Medical Department, and arrangements made by which they are supplied to the defender of his country without charge. The application must be made to the nearest Medical Director, who will give an order for them. They are made by Wm. Selpho & Son, 516 Broadway, New York, who are the inventors.

Mr. T. J. Bradley, the general traveling agent has them in charge.

Mr. B. has had the misfortune to lose one of his limbs above the knee, leaving him only a six-inch stub, and yet few who see him walk would suspect that he was indebted to a wooden leg for the power of locomotion. So perfect is the substitute that Mr. B. is enabled to do nearly the same work to which a sound man is accustomed.

The limbs are eminently durable, elastic, light, strong, and what is of no small importance, they produce less painful friction than any that we have seen.

FANCY WORKS, ETC.

The specimens of shell work are not only numerous but fine. The usual amount of quilts, crochet work, and the thousand and one little things that the ladies know so well how to make for both use and beauty, go to fill up the Hall.

CLOTHING.

The only exhibitor in this line is the firm of G. T. Belding & Co., of Chicago. They have a large

stock, larger, indeed than we usually find in a country store, and yet this large display is made up of samples of the stock at headquarters. The quality of the goods is first rate. The garments are tastefully cut and well made. The sewing machine has done away with slop work on goods like those here presented.

Mr. Matson, the Superintendent of this hall, has made it one of the great points of attraction. Everything is tastefully arranged to show to the best advantage, and the utmost decorum and good order prevails throughout the hall. We regret he would not allow himself to be re-elected.

STALLIONS IN HARNESS.

Purse of \$300. Best 2 in 3. First premium \$200; 2d, \$100.

Entries—Grey Eagle, grey, owned by J. D. Franklin; Georga M. Patchen, bay, owned by Thomas Smith; Clifford, bay, owned by S. and H. Chapin; Daniel Boone, bay, owned by John Williams.

The first and second heats won by Daniel Boone in 2:31½ and 2:82.

First premium to Daniel Boone, 2d premium to George M. Patchen.

CATTLE.

Short Horn Bulls—4 years old and over:

1st premium, Young Cato, owned by J. H. Southors, of McLean county.

2d premium, \$12, Lord Highland, owned by J. H. Pickrell, of Macon county.

SHORT HORN COWS.

3 years, 1st prize, Zonobia; J. N. Brown, \$25.

2d prize, \$15, Julia Clay, J. H. Pickerell.

The committee was unanimous in the opinion that this lot of cows excelled, and that there was so little difference, that they would have been pleased to have awarded four premiums.

Heifer, 2 and under 3 years, 1st prize, Minnehaha, J. N. Brown, \$25.

2d prize, Lady Jones, J. M. Hill, \$15.

1 year and less than 2 years, 1st premium White Lady, \$15, J. M. Hill.

2d best, Lady Childs, J. H. Pickerell.

Calf under 1 year, 1st premium, Lady Frances 2d, \$25, J. M. Hill.

2d best, Mary Bell, \$15, J. B. Eyborn.

PURCHASE OF SHORT HORNS.

David A. Gage, of Chicago, purchased for his farm at Brighton, near Chicago, of Capt. J. N. Brown, of Sangamon county, one bull and seven cows, at a handsome figure. These Durhams are to make a trial of their feeding qualities on the Chicago prairies.

Emry Cobb, of Kankakee, purchased of J. M. Hill, of Macon county, the four year old bull, Grand Duke of Adric, that took the first prize of his class yesterday; also two yearling Durhams, very fine animals.

Mr. Cobb is the President of the Kankakee county Agricultural Society, and this purchase will be a timely hint to others to brush up their stock, if they do not wish to fall behind.

FARM PRODUCTS.

This Hall is much better filled than last year, though nothing like what it should be.

Best bushel white winter wheat—1st premium \$10 to W. Frick, of Jonesboro, Illinois; second premium \$5, to Stillman Barber, of Milmine, Ill.

These were the only entries—samples very fine. Red winter wheat—1st premium, \$10, to R. K. Landson, of Wilson.

This is the only entry of red.

SPRING WHEAT—NINE ENTRIES.

1st premium, \$10, to E. P. Jones, Insane Hospital Farm, Jacksonville.

2d best, \$5, to J. R. Moon, Decatur, Ill.

RYE.

1st premium, \$5, to Stillman Barbor, Milmine, Ill.

2d best, \$3, to M. L. Dunlap, Champaign, Ill.

OATS—SEVEN ENTRIES.

1st premium, \$10, to J. S. Pardee, of Rockford, Ill.

2d best, \$3, to Frank Searles, of Hadley, Ill.

SPRING BARLEY.

1st premium, \$5, to James Hart, of Harristown, Ill. No other entry.

BEST BUSHEL WHITE CORN—SIX ENTRIES.

1st premium, \$10, to J. R. Moon, Decatur, Ill.

2d best, \$5, to J. Jefferson, Decatur, Ill.

Best bushel yellow corn—four entries.

1st prize, \$10, to Wm. Sanders, Harristown, Ill.

2d prize, \$15, to J. Spangler, Decatur.

Best corn on stalk—1st prize, \$2, to W. Sanger, Harristown, Ill.

2d prize, \$1 A. A. Hooker, Decatur.

Best bushel timothy seed, 1st prize \$5; Stillman Barbor, Milmine, Ill—only one entry.

Best bushel clover seed, 1st premium \$10 to C. H. Rosensteel, Stephenson county—no other entry.

Best bushel early Irish potatoes—six entries, 1st premium \$10, to M. L. Dunlap, (variety, Early York,) of Champaign, Ill.

2d best \$6, to Dr. H. Shroeder, Bloomington.

Best bushel late Irish potatoes, 1st premium \$2, B. N. Davis, Belleville.

2d best, \$1, Dr. H. Shroeder.

Sweet Potatoes, 1st premium \$3, J. A. Carpenter, South Pass, Union county, Ill.—four entries.

Onions, 1st premium \$5, S. Wilbur, Kankakee county—two entries

Beets, 1st premium \$2, Nancy Warren.

Best 12 stalks celery, 1st premium \$3, Insane Hospital, Jacksonville.

Best six heads cabbage, 1st premium \$3, Susannah Talt, Decatur.

2d best \$1, Dr. Shroeder, Bloomington.

One-half bushel best tomatoes 1st prize \$3, J. F. Sehoshk, Decatur.

Best peck lima beans, 1st premium \$2, G. W. Patt, Decatur.

2d best \$1, Anna M. M. Garvin, Decatur.

Best and greatest variety garden seeds, 1st premium \$5, S. Wilbur, Momence—two entries.

Best lot pumpkins, 1st premium \$1, Nathan Harrindeen, Decatur—five entries.

Best and greatest variety of vegetables by one person, 1st premium \$10, C. P. Jones, insane hospital.

2d best \$5, S. Wilbur.

Best and greatest variety of garden seeds, 1st premium \$5, S. Wilbur—no competition.

Best ten pounds tobacco, 1st premium \$5, G. W. Piatt, Decatur.

MISCELLANEOUS.

H. J. Dunlap, Champaign, one-half bushel flaxseed, 1st premium.

Starch made from Indian corn, 1st premium \$3, Mrs. C. M. Rhorer, Decatur.

Firkin butter,—a solitary tub, like a lone star—first premium \$10, Thomas Smith, Ogle county.

Best 20 lbs. butter, three entries; 1st premium \$10, James Hart, Harriestown.

FARMERS' MEETING.

The farmers held a meeting at the amphitheatre, instead of the club room, as previously stated. The attendance was not large. Prof. J. B. Turner, Gen. W. D. Wilson, Secretary of the State Board of Agriculture of Iowa, Hon. G. W. Minier, of Tazewell county, and W. H. Van Epps delivered eloquent and logical addresses. The committee reported the following resolutions:

WHEREAS, The industrial interests are of paramount importance, all others being dependent upon their prosperity; and

WHEREAS, Congress has made a magnificent grant of four hundred and eighty thousand acres of land, the proceeds of which are to be used for the endowment of an industrial College for the promotion of Agriculture and the Mechanic Arts; and

WHEREAS, Certain existing institutions have sought to divide this fund and partition the same among themselves, therefore,

Resolved, That we distinctly reiterate that the industrial interests of this State are one and indivisible; that the industrial classes are perfectly competent to draft a plan and arrange the details for the proper disbursement of this fund.

Resolved, That we endorse the sentiments contained in the resolutions of the Farmers' Conventions held at Springfield in June, 1863, and January, 1864, that there should be but ONE INSTITUTION created out of this fund, and that it should be entirely untrammelled by connection with any existing institution.

Resolved, That we, the industrial classes of Illinois, pledge ourselves to combine to use our utmost efforts for the advancement of our educational interests, and, knowing as we do, that these are the foundation upon which the permanent prosperity of the nation rests, we will continue to labor to devote that fund sacredly to the purpose for which it was intended viz: "the establishment of one institution in this State in which the leading object shall be to teach such branches of learning as are related to agriculture and the mechanic arts.

Resolved, That as the arts and sciences are intimately connected with true progress in agriculture, it is of the utmost importance that this institution receive an endowment commensurate with the magnitude of the object in view.

Resolved, That seeing feeling and knowing the want of practical education in our several employments, we are determined to provide a better state of things for our posterity.

Resolved, That we will support no man for office, whatever his political associations may be, unless we have full assurance that he will labor to carry out our views in this matter as herein expressed.

Resolved, That we consider the present candidates for the office of Governor of this State as pledged in favor of using this fund as contemplated in these resolutions.

Resolved, That we refer 'all to whom it may concern' to the foregoing preamble and resolutions as embodying our "claim" in the premises.

Resolved That we hereby appoint Wm. H. Van Epps, J. B. Turner, John P. Reynolds, A. B. McConnell, and B. G. Roots as a committee whose duty it shall be to frame a bill, and urge its passage by the next General Assembly of this State, for the organization of an institution and disposition of the fund as contemplated by the act of Congress making the grant, and in accordance with these resolutions

Resolved, That we request all the newspapers in this State to publish these resolutions.

CHAS. W. MURTFELDT,
Chairman.

O. B. GALUSHA, Secretary.

FIFTH DAY.

DECATUR. Sept. 16, 1864.

Last night the full moon rode in stately grandeur, and the camp fires of the farmers who were in attendance and camping outside, sent a pleasant glow through the old forest that skirts the Fair Grounds. Everybody seemed to be astir enjoying the most beautiful evening, for no evening in the year can compare with that of the full moon in September, when, as is generally the case, the weather is clear.

The weather continues fine, and were it not for the dust, little complaint could be made. Inside of the grounds and about the entrance gate the dust is kept well under with the sprinkling cart, and those who will avail themselves of the railroad avoid the dust. We observe at this Fair, for the first time, a large number of farmers' teams inside of the grounds. The teams are turned to the hind end of the wagon, to which the usual feed box is attached, and the bed supplies a sort of headquarters for the family, and make a rallying point. We are pleased with the arrangement, and hope that it may become somewhat universal. The charge for this privilege is but a trifle, compared to its saving of shoe leather and the running in and out of the gates to camp or to look after the team.

Flanders, the "Bee King," is making a rich harvest in selling rights for his patent bee hive, the "bee charm," and his little work on bees. With half a swarm of bees on his cap, attracted by the "bee charm," he of course holds his audience and makes large sales. The bees fly in and about the crowd, and no one appears to entertain the idea that they are ever to do such a naughty thing as to sting. Those bee men are doing good by showing that bees can be managed without difficulty, when their habits are understood.

We invested half a dollar for the "bee charm," which we suspect is something of a humbug. But our motto is to try all things and "hold fast that which is good," so if we lose in the operation our readers will be the gainers, if they will heed it.

The committee in the Agricultural Department are busy tying on the ribbons.

Among the cultivators are Furst & Bradley, of Chicago, who took the blue ribbon for the best cultivator.

PLOW FOR OLD LAND.

The competition in this line was more than usually spirited, there being eleven entries. First premium silver medal.

John Dement, of Dixon, was again the fortunate winner, draft, 475 lbs; cuts, 13 inches wide. The committee say of the Deere & Co. Moline plow "highly commended." The committee regret that there is no second premium. Draft 425 lbs; cuts 13 inches wide.

THRESHING MACHINE AND SEPARATOR.

J. I. Case & Co., Racine, Wisconsin, 1st premium—silver medal.

BEST 8-HORSE POWER.

J. I. Case & Co., Racine, Wisconsin, 1st premium—silver medal.

CLOVER HULLER AND SEPARATOR.

J. A. Carpenter, Beloit, Wisconsin—silver medal; cost \$70.

CIDER MILLS.

Six entries. Competition very spirited. Operators making and selling cider on their own account at ten cents a glass, or at the rate of three dollars a bushel. Our good friends will see that at a dime a glass that windfall apples are worth picking up for this purpose.

1st premium, silver medal, F. C. Winslow, Freeport; cost of mill seventy-five dollars. This is a new mill, and so far as we know, untried, at least no thorough trial of it has been made. It has the appearance of being valuable, and the committee guess it will prove satisfactory on trial.

Clark & Utter, of Rockford, show a very excellent mill; strong, durable and simple. Price \$60.

Austin & Boal, of Chicago, exhibited one of the Hutchinson mills, which did rapid work and made several hundred gallons of cider. The Spring Hill mill was also at work. There was at least three of the exhibitors who had plenty of apples and were ready for a thorough test, and yet the committee made a guess and tied the blue ribbon to a mill that may and may not be valuable. It certainly has one or two serious defects, though in the pressing it has a new feature that if successful will give it a prominent place. It is due the orchardist that this machine should have been tried, and not thus impose a premium machine on the public in this manner. We protest against being thus victimized by any committee. We want trials when trials can be had and if the committee err, it is not more than human; they may do it honestly. This is not the only complaint made against the same committee, of which we may have more to say.

Horse power corn sheller, 1st premium, silver medal; Sanger & Co., Joliet. A. Adams & Co.'s machine did not arrive.

HORSE HAY FORKS.

1st premium silver medal; T. G. & M. N. Palmer, Chicago; four entries. This is a very strong, durable and handy fork, and has been busy illustrating its working facilities.

HAY PITCHING MACHINE.

Four entries, silver medal; T. G. & M. N. Palmer, Chicago. This is the best implement that we have ever seen, and in company with the hay fork has had a large share of attention.

STRAW AND HAY CUTTER.

Six entries, silver medal; W. D. Schooley, Richmond, Ind.

SMUT MACHINE.

Geo. E. Throop, Chicago; silver medal.

Largest and best display of Agricultural Implements, silver medal: Emerson & Co., Bockford.

Dr. Crone, of Decatur, shows a lot of turned ax handles; commended.

James Mason, of Polo, had a corn stalk cutter, a machine, by which it is claimed a boy and one horse can cut and lay in bundles ready for shocking, six to eight acres a day. The cost is \$130. The machine is highly valuable.

PLOWS.

Best two-horse turf plow, Deere & Co.' Moline, 2d premium; silver medal.

GANG PLOWS.

Seventeen entries, making a much larger show than last year. It is evident that the demand for this kind of implement is on the increase, or we should not see so much competition. The silver medal was awarded to J. F. Black, of Lancaster, Ill., while the implement of E. Lewis, Kankakee, and that of Jacob L. Runk, Nashville, Ill. were highly recommended.

ONE HORSE PLOWS.

Silver medal to John Dement, of Dixon.

One-horse double or treble plow, silver medal to Deere & Co.

TRENCH PLOW.

Four entries; J. F. & W. L. Black, of Lancaster, was awarded the silver medal.

SUBSOIL PLOW.

One entry; but it did not work to the satisfaction of the committee.

NEWLY INVENTED IMPLEMENT.

One entry; "Simply a gang plow; no award."

TWO HORSE INDEPENDENT CULTIVATOR.

Fifteen entries; abundant competition and all worthy machines. The committee say: "The committee find so many excellent machines of this class that it is extremely difficult to make a distinction." With a few exceptions, all the horse cultivators exhibited show great excellence in construction, and did good work in the field. The premium, a silver medal, was awarded to Furst & Bradley, of Chicago.

Two horse cultivators, with combination for seeding and planting—eleven entries; showing that this new style of implement is rapidly becoming popular. The silver medal was awarded to C. Denton, Pekin, Ill.

Thomas Short, of Fairmount, Ill., had a very superior machine in this class which may some day graduate into usefulness in the corn fields.

GRAIN DRILLS.

These are nearly all of new styles of seeding machines, and in some cases show a wide divergence from the grain drill. McSherry, Eneisley & Co., of Dayton, Ohio, took the silver medal.

BROAD CAST GRAIN SOWER.

Gatt, Tracy & Co., of Sterling, took the silver medal.

CORN PLANTERS.

Now comes the tug of war, just where the greatest excitement exists. Ten entries. The committee are at loggerheads with the competitors, hav-

ing awarded the silver medal to Geo. J. Bergen, of Galesburg. Well, wonders will not cease, and we may not wonder how they came to make the award to this machine. Doubtless they were honest in their conviction, as at a fair no thorough trial of such an implement can be had. The corn must be planted and allowed to grow up so as to show the rows. Year after year just such premiums are made, and yet the planting public persist in buying such old foggy machines as G. D. Brown's of Galesburg, Silby, and Elder, and Hayworth, of Springfield. We have been patiently waiting for a planter combined with a roller, but thus far it does not appear, and we have passed our orders over to Brown, for one of his new improved drill planters. This will plant corn, broomcorn, sorgho, beans, and is adjustable to wide or narrow rows—to hills—to check-rowing and drill, what more do we want in the way of a planter? We, the special committee of the people, have now had our way; and let corn-planter makers look well to new, as well as to old laurels.

SHEEP.

Spanish Merinoes.

Best buck two years old, 1st premium, \$15, C. H. Smith, of DeKalb county.

2d premium, \$10, Will Stewardson, Shelbyville.

Bucks under 2 years, 1st premium \$15, Gorham & Gilett, of Hadley, Ill.

2d premium \$10, Fowha & Bush.

Best buck lamb, under 1 year, 1st premium \$15, C. H. Smith, of Ney, DeKalb county.

2d premium \$10, C. H. Smith, Ney, DeKalb county.

Best pen of 3 ewes under 2 years, 1st premium \$15, C. H. Smith, Ney, DeKalb county.

2d premium, John Foulk, Mendola.

Best pen of 3 ewe lambs under 1 year, 1st premium, C. H. Smith, Ney, DeKalb county.

2d premium \$10, C. H. Smith, Ney, DeKalb county.

French Merinoes.

Buck over 2 years, 1st premium, C. H. Rosensteil, Freeport, Ill.

2d premium \$10, W. D. Bonta, Pleasureville, Henry county, Ky.

Best buck under 2 years, 1st premium \$15, C. H. Rosensteil, Freeport, Ill.

2d premium, P. G. Sander, New Milford, Ill.

Best buck lamb under 1 year, 1st premium \$15, C. H. Rosensteil, Freeport.

2d premium \$10, no entry.

Pen of 3 ewes under 2 years, 1st premium \$15, C. H. Rosensteil, Freeport.

2d premium \$10, no entry.

Pen of 3 ewe lambs under one year, 1st premium, \$15, C. H. Rosensteil, Freeport.

2d premium \$10, no entry.

Long Woored.

Best buck over 2 years old, 1st premium \$15, P. G. Bander, New Milford, Ill.

2d premium, \$10, E. F. Hes, Springfield.

Best buck under two years, 1st premium \$15, P. U. Bauder, New Milford.

2d premium \$10, D. S. Allen, Harristown.

Best buck lamb under 1 year, 1st premium \$15, E. F. Hes, Springfield.

2d premium \$10, D. S. Alzen, Harristown.

Pen of three ewes over 2 years, 1st premium \$15, P. G. Bander, New Milford.

2d premium \$10, D. S. Allen, Harristown.

Pen of ewes under 2 years, 1st premium \$15, C. L. Pate, Catlin, Ill.

2d premium, \$10, P. G. Bander, New Milford.

Middle Woored, South Down, etc..

Best buck over 2 years, 1st premium \$15, J. N. Brown, Berlin, Ill.

2d premium \$10, E. P. Hes, Springfield.

Best buck under 2 years, 1st premium \$15, J. O. Brown, Berlin, Ill.

2d premium \$10, E. F. Hes, Springfield.

Buck lamb under 1 year, 1st premium \$15, J. H. Pickrell, Harristown.

2d premium \$10, C. H. Rosensteil, Freeport.

Pen of ewes over 2 years, 1st premium \$15, J. N. Brown, Berlin, Ill.

2d premium \$10, J. H. Pickrell, Harristown.

Pen of ewes under 2 years, 1st premium \$15; no award.

2d premium \$10; no award.

Pen of ewe lambs under 1 year, 1st premium \$15, C. H. Rosensteil, Freeport.

2d premium \$10, J. H. Pickrell, Harristown.

Crosses of Pure Breeds.

Buck over 2 years, 1st premium \$15, P. G. Bander, New Milford, Ill.

2d premium \$10, P. G. Bander, New Milford.

Buck under 2 years, 1st premium \$15, E. E. Gorham, Hadley, Ill.

2d premium, \$10, P. G. Bander, New Milford.

Buck lamb under 1 year, 1st premium \$15, E. E. Gorham, Hadley, Ill.

2d premium \$10, P. S. Spencer, Danville, Ill.

Pen of 4 ewes over 2 years, 1st premium \$15, P. G. Bander, New Milford, Ill.

2d premium \$10, C. H. Rosensteil, Freeport.

Pen of 3 ewes under 2 years, 1st premium \$10, P. C. Spencer, Danville, Ill.

2d premium \$10, C. H. Rosensteil, Freeport, Ill.

Pen of 3 ewe lambs under 1 year, 1st premium \$15, E. E. Gorham, Hadley, Ill.

2d premium \$10, P. G. Bander, New Milford, Ill.

Fat Sheep,

Best 3 fat sheep over 2 years, premium \$10, E. F. Hes, Springfield.

Best 3 fat sheep under 2 years, J. N. Brown, Berlin, Ill., 1 entry.

Sweepstakes.

Best lot of sheep of any age, not less than 1 buck and 9 ewes, 1st premium \$20, J. N. Brown, Berlin, Ill.

2d premium \$10, D. S. Allen, Harristown, Ill.

Sweepstakes—all Fine Woored.

Best lot of sheep of any age, not less than 1 buck and 9 ewes, 1st premium \$20, C. H. Smith, Ney, Ill.

2d premium, P. S. Spencer, Danville, Ill.

The show of sheep was the best that we have had in the West. We have as good flocks in this State as in any part of the West, and our sheep men may begin to talk of supplying their neighbors with the best. There is no longer need to import sheep from Vermont, but more need of Vermont sending here for a new infusion of the best to tone up the health of their flocks.

SWINE.

Berkshires.

Best boar over 1 year old, 1st premium \$10, Jesse Cloyd, Champaign, Ill.

2d premium \$6, T. J. Crowder, Springfield, Ill.

Boar under 1 year old, 1st premium \$10, Jesse Cloyd, Champaign, Ill.
 2d premium \$5, T. J. Crowder, Springfield, Ill.
 Best sow over 1 year old, 1st premium \$10, T. J. Crowder, Springfield, Ill.; one entry.
 Best sow under 1 year old, 1st premium \$10, T. J. Crowder, Springfield, Ill.
 2d premium, \$5, Jesse Cloyd, Champaign, Ill.
 Best sow with litter of pigs, 1st premium \$15, T. J. Crowder, Springfield, Ill.; one entry.
 During the Fair Jesse Cloyd sold about a dozen pigs, to be shipped from his farm near Champaign, at \$25 each.

Cumberland, Yorkshires, Chester Whites, Woburn, Isiah and Magic Breeds.

Best boar over 1 year old 1st premium \$15, Ralph & Ferguson, Champaign, Ill.
 2d premium \$5, O. Wallace, Springfield, Ill.
 Best boar under one year, 1st premium \$10, Ralph & Ferguson, Champaign, Ill.
 2d premium \$5, Henry Funk, Bloomington, Ill.
 Best sow over 1 year old, 1st premium \$10, O. Wallace, Clayton, Ill.
 Best sow under 1 year old, 1st premium \$10, Henry Funk, Bloomington, Ill.
 2d premium \$5, Ralph & Ferguson, Champaign, Ill.
 Best sow with litter of pigs, 1st premium \$15, Frank Searls, Hadley, Ill.

China, Suffolk, Essex, and other small and distinct breeds.

Best boar over 1 year, 1st premium \$10, P. G. Bander, New Milford, Ill.
 2d premium \$5, J. M. Gillet, Hadley.
 Best boar under 1 year, 1st premium \$10, Chas. Snoad, Joliet; one entry.
 Best sow over 1 year, 1st premium \$10, P. G. Bander, New Milford; one entry.
 Best sow under one year, 1st premium \$10, C. Snoad, Joliet; one entry.

Crosses.

Best boar over 1 year old, 1st premium \$10, E. P. Jones, Jacksonville, Ill.; Hospital breed.
 2d premium \$5, Chas. Snoad, Joliet, Ill.
 Best boar under 1 year old, 1st premium \$10, E. P. Jones, Jacksonville, Ill.
 2d premium \$5, David Callihan, Springfield, Ill.
 Best sow over 1 year, 1st premium \$10, E. P. Jones, Jacksonville, Ill.
 2d premium \$5, L. M. Cillett, Hadley.
 Best sow under 1 year, 1st premium \$10, O. Wallace, Clayton.
 2d premium \$5, E. P. Jones, Jacksonville,

LADY EQUESTRIANSHIP.

Entries.

Mrs. S. R. Smith, \$20.
 Miss Ruth A. Gardner, \$10.
 Miss Elizabeth Wittmer, \$5.
 Mrs. Lucy Cooper.

The riding was very graceful and reflected great credit upon the lady riders. Considerable dissatisfaction was exhibited at the award by the Macon county people. Doubtless fine dresses and flowing robes have their weight with the committee, for who has not something of an eye to beauty in dress as well as person?

SADDLE HORSES, MARES, ETC.

Best stallion over 4 years, 11 entries, W. Saxon, North Amer, i' Sparta, 1st premium.
 Adolphus Dillon, Boynton, Louis II. 2d premium.
 Best stallion over 3 and under 4 years, Isiah Diller, Boynton, Interest, 1st premium.
 Charles McKay, Scoles Mound, Ill., London Tom, 2d premium.
 Best stallion over 2 and under 3 years, Levi Dillon, Boynton, Little Giant, 1st premium.
 Isiah Dilon, Boynton, Great Western, 2d premium.
 Saddle geldings over 3 years, 15 entries.
 Henry Hedges, Indianolee, Cy, 1st premium.
 John Megredy, Springfield, Paddy, 2d premium.
 Best brood mare over 4 years, Isiah Dillan, Boynton, Ill. Fly, 1st premium.
 Levi Dillan, Boynton, Hattie, 2 premium.
 Best filly over 3 and under 4 years, Elias Dillan, Boynton, Margaret, 1st premium.
 Best filly over 2 and under 3 years, Isiah Dillon, Boynton, Amanda, 1st premium.
 Gavni Bisket, Sparta, Ill., 2 premium.
 Best sucking colt, Gavni Bisket, Sparta, 1st premium.
 G. Fisher, Armington, 2d premium.

SADDLE MARES.

John Nichols, Springfield, Rose, 1st premium.
 W. D. Bonta, Pleasureville, Ky., Kite, 2d premium.

LADIES EQUESTRIAN MATCH.

Four entries: 1st premium, Mrs S. R. Smith, Springfield; 2d premium, Miss R. A. Gardner, Decatur; 3d premium, Miss E. Waltner, Decatur; 4th premium, Miss Lizzie Cooper.

TROTTING MATCH—CITIZENS' PRIZE.

Best 3 in 5. Prize \$500. Entries—Nobocelish, by Jas. Conlish; Lady Turner, by J. Turner.
 Nabocelish won 1st heat in 2:30, and 2d in 2:29½.
 Lady Turner won 3d heat in 2:28, 4th in 2:29, and 5th in 2:27.

CARRIAGE MARES.

1st premium, B. E. Deyo, Lee county.
 2d premium, G. W. Lory, Christian county.
 The day has been one of great pleasure to the large number of visitors. To-morrow will show the breaking up and dismantling of the grounds, until another year shall have rolled its ample round.

The receipts foot up to-day \$2,200 against \$1,897 same day last year, making a total of \$12,700; a highly gratifying state of things, and will show to the outside world that the State of Illinois is yet a live State, and as usual ready to feed the million.

The ladies at the Dining Hall have done nobly, and for this exertion on behalf of the soldier, peans of praise shall go up to the throne of the Most High.

SIXTH DAY.

DECATUR, Sept. 17, 1864.

We have now reached the last morning of the Fair. Throughout the week the weather has been the most favorable that could be desired. Not a cloud has come up to threaten us with rain. The sun has been a subdued September sun, with a mild, cool breeze from the southwest, tempered by the forest skirts that fringe the Grounds. The

show has been good, the attendance large, and no accident has occurred to mar the harmony of the occasion. The Fair on the whole has been a grand success.

The amount received will be a trifle above seventeen thousand dollars—the largest sum ever taken at any of our State Fairs. The Dining Hall, Booths and Amphitheatre are held by the Macou county Agricultural Society, and the police fines go to them also. For these they allow the State Society two thousand dollars, leaving them a handsome net balance.

The citizens of Decatur have done all in their power, and we hear no complaint from any quarter but from the draymen and hackmen. The Great Western Railroad has held this latter class in check, and had the farmer boys who came in from the country been allowed to compete with them in the hauling of goods, the exorbitant charges of the draymen would not have been heard of.

The chief business of the morning is the awarding and paying of premiums. The bleating of sheep and the lowing of cattle are the main music this morning, as they make their report from the Grounds. Drays and wagons are loading with the various inanimate objects that have made up the show in the several departments. To sum up, the Grounds are being dismantled to stand in solitary grandeur for another year, when the great industrial army may again enliven it with their presence. It is a beautiful spot, with its blue grass carpet, its ample springs of pure water, set down in a great reach of the old forest that fringes the Sangamon.

LABOR SAVING MACHINES.

We have only time to remark upon a few of the more prominent features in the implement department, the Hay Loader has attracted considerable interest. It is attached to the hind end of a wagon, and will put a load on from the winrow in about ten minutes. We know nothing of the working of the machine in the field, but suspect that a more correct appreciation can be had of it in that situation. If a high wind does not interfere with its operation and it will do clean work, it will be a great boon to the farming interest. The cost of it is \$75 at the shop in Chicago.

Palmer's Hay Pitcher has been the center of attraction throughout the Fair. There has been one opinion in regard to it, and that is largely in its favor. It must become incorporated in the list of haying implements, at least on large farms. By its use large stacks can be made and most thoroughly topped out. Its cost, including fork, is about \$80.

SUGAR CANE MILLS.

Among the sorgo mills Skinner's mill, of Madison, Wisconsin, took the first prize. This mill is adjustable with weighted levers, and is the best mill that we have seen. It wrings the last drop of juice from the cane. In evidence of this a lot of bagasse from one of the mills with set screws was run, the "Skinner," wringing out a large amount of juice.

Brown's corn planter stands among the new family of planters with age and freshness combined. No planter is so widely known. Its adaptability to drop all kinds of corn and cane, in hills or drills at any required width, with or without being hand checked, will make it hold the lead in this useful class of machines.

MECHANICS' HALL.

In the Mechanics' Hall we note little that is new and useful in the household. There are two looms and a spinning wheel, but we hope never more to hear the music of the loom or that of the spinning wheel. They have been banished from the domestic hearth and sent to the shop where fast revolving wheels and the clank of the loom send out their music with the pulsations of the steam engine, or the murmur of the flowing river as it dashes its waters against the paddles that move the busy wheels. Let the loom stay where it is, for we have no patience or taste for hand looms or hand spinning wheels.

WASHING MACHINE.

The display of washing machines was large, but we regret that our fair friends have no new encouragement in these machines, and must continue to bend and sweat over the wash tub. Yet there is a reeeming quality in the wringing of the washed goods, though this has already become a well fixed principle in the washing departments. The blue ribbon was attached to the "Universal Clothes Wringer," the cog wheels carrying the day. The competition was very spirited, and we observed the ladies taking sides. Well, who has a better right to. Genius now and then throws them down a crumb and anon a shower. Now that it has rained wringers, will not their good genius send them a good washing machine.

BEET SUGAR.

Messrs. Gannart Bros., of Chatsworth, Iroquois county, have on exhibition a barrel of beet sugar, the first made in the United States. This sample is crude sugar and contains the offensive beet taste, with a dark color, and is unfit for use without refining.

SORGO SUGAR.

Samples of sugar and molasses manufactured from the Chinese sugar cane, by Sheldon's Patent Rectifying Process, were exhibited. These samples are very satisfactory and show progress in this direction. They are equal to the best Orleans sugar. This process expels every vestige of that disagreeable acid or flavor so common in sugar and molasses by other processes. The molasses for all culinary purposes is equal to the best. The first premium was awarded this sugar. The patentee is a native of this State and hails from Abington, Knox county.

PACING IN HARNESS.

Best three in 5. 1st premium \$150; 2d premium \$50. At 11 o'clock A. M. this pace came off.

McKinney, owned by L. N. Holcomb, won the first three heats; time 2:29, 2:28, 2:24½.

2d premium, Dick Turpin, owned by Lewis Glenn. Polly Ann was withdrawn.

THE POLICE.

Joseph Kaufman, Esq., presided over this department, and has done a thriving business. Pickpockets and petty villains stand a poor chance under such efficient arrangements as Superintendent Pickrell made for their accommodation. Nearly all of the arrests were for selling whisky, climbing over the fence and for common drunks. No fights are recorded and but one pickpocket arrested, and he not convicted. But few cases of pocket picking have been reported. The fines amount to \$1500.

The experiment of a dancing floor has not met the expectations of its projectors—that of pleasure and a high moral tone of its patrons was anticipated. It degenerated into a mere low dance house. It is a failure and we hope to never see it repeated. In Europe these things are common among the peasantry in the rural districts, and is pleasant and healthful and, in a social aspect, moral.

Of the Sanitary Fair we shall speak in another place.

The officers of the Society have all worked with a will, never before to as good advantage, for they have learned at former fairs more of the wants of the occasion.

We have now aimed to make a complete report, but have many things laid up for future comment. We trust our readers will be satisfied with our industry during the week.

THE CLOSE.

The twelfth Fair of the State of Illinois is now drawing to a close. As we now write in the editors' room, 5 P. M., little of interest is going on.—The crowd have left, the tents are struck, and one by one the exhibitors go out of the gate. Then fades away the glory of the show and the people are homeward bound. The last train is thundering in the distance and we too must leave these grounds to stand alone in their solitude.

Editor's Table.

BAKER & PHILLIPS - - - PUBLISHERS.

M. L. DUNLAP, Editor.

SPRINGFIELD, ILLINOIS, OCTOBER, 1864.

September has proved a busy month in this part of the State. The high price of wheat and oats has called out all the available threshing machines to get the crop to market as fast as possible. Add to this an immense sorgo crop, with a sprinkling of beans, broomcorn and the sowing of an unusual breadth of winter wheat, and outsiders can imagine that at least some of the farmers have been busy. But this is not all: State and county fairs have been attended, even more freely than usual, and now the inexorable draft must take sixteen thousand laborers from field and shop. "But," says one, "your county is out of the draft." Well, what of it? Chicago wants a thousand men and will pay a large price for them; other northern counties do the same. Bounties are offered and away go our laborers to fill up the quotas. Let it be so; drive on the war car through the red field until it reach the shores of an abiding peace.

For ourself, work has driven us right along, and we have had to take an active part in the field, with the exception of the week at the State Fair.

Our notes on that occasion occupy a large part of the present number.

If the FARMER lacks interest it is because we are taking actual lessons and perfecting our education in the field, that we may be all the more capable of teaching when the leisure hours of the coming year furnish the occasion.

The autumn frost lies just in the offing and will soon be down on us; then we may be but a reality, with no time for State and county fairs.—How we shall get on must be left for the time of trial to solve.

Our table is loaded with good things for future use, but they cannot be served up at this time.—Forty acres of orchard must be set out in the next sixty days; our customers at the nursery must be served; several thousand evergreens must be set out; potatoes dug, apples picked, cider made, and an innumerable lot of small jobs to be done up and all this with the smallest possible number of hands; and some of these of the poorest kind.

The whole country is enjoying most excellent health, which enables the farmer to drive ahead and to accomplish large tasks. The new implements also help us out. The cast-steel plow pleases us vastly, and two of them are being run by two of our small boys; of course they have each a weed hook and wheel coulter. Don't these boys feel proud of their straight, smooth furrows!—well, we rather think they do. We have a great regard for boys who can make straight, smooth furrows, and they like nice plows with all the new implements. Now, that so much fall plowing must be done, it will pay to look a little after a good plow rig.

We hope our readers will excuse any present short comings, for we know that like ourselves, they have little time to read or find fault.

Large Sale of Blooded Stock.

Having associated with me in business my sons, (William and Charles S. Brown,) I will sell at public auction, at my residence, Grove Park, in Island Grove, Sangamon county Illinois, three miles west of Berlin, on the road leading from Springfield to Jacksonville, on Wednesday and Thursday, August 24th and 25th, 1864, (sale to commence at ten o'clock,)

Thirty or Forty Superior Short Horn Cattle, consisting of Cows, Heifers and Young Bulls; also South-Down Sheep and Berkshire Hogs, from the importation of the Illinois Importing Association of 1857; also a number of valuable

BROOD MARES COLTS AND FILLIES,
of trotting stock.

Catalogues of Stock will be issued in due time.—Persons desirous of obtaining them can do so by addressing me at Berlin, Illinois.

Aug-'64-1t

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A very large stock of superior grown Evergreen Seedlings, at less than one-half the Eastern Prices.
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old, six to nine inches,

\$3.00
- SCOTCH PINE, two years old,
three to five inches,

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- AUSTRIAN PINE, two years old, \$2 per 100.
- BALSAM FIR, RED CEDAR, ARBARVITÆ, &c., &c.,
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- A large stock of CONCORD GRAPES, one of the
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DES MOINES IOWA, Jan. 1, 1863.

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This nursery has good stock of apple trees of all
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green house is well stocked with roses and other bed-
ding out plants. This stock is grown to retail and
not adopted to the tree peddler, as all trees and plants
are large, stocky and thrifty, and intended for the
planter only. Terms cash with low prices.

Address, M. L. DUNLAP,
Champaign.

March 1, 1863.tf

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